

Grizzly **Industrial, Inc.**®

MODEL H2933/H2934/G0447/G0581 DOUBLE-HEAD WIDE-BELT SANDER INSTRUCTION MANUAL



COPYRIGHT © SEPTEMBER 2005 BY GRIZZLY INDUSTRIAL, INC.
**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**
#CR7108 PRINTED IN TAIWAN



WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemical are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Table of Contents

- INTRODUCTION..... 3**
 - Foreword 3
 - Contact Info 3
 - Control Panel Features 4
 - External Features 4
 - Internal Features 5
 - Machine Data Sheet (H2933) 6
 - Machine Data Sheet (H2934) 7
 - Machine Data Sheet (G0447) 8
 - Machine Data Sheet (G0581) 9
- SECTION 1: SAFETY 10**
 - Safety Instructions for Machinery 10
 - Additional Safety for Wide Belt Sanders 12
- SECTION 2: CIRCUIT REQUIREMENTS 13**
 - 220V/440V Connection 13
 - Extension Cords 13
 - Grounding 13
 - Amperage Loads 13
 - 440V Connection 14
- SECTION 3: SET UP 15**
 - Unpacking 15
 - Inventory 15
 - Hardware Chart 16
 - Clean Up 17
 - Site Considerations 17
 - Beginning Assembly 18
 - Air Line Installation 18
 - Dust Collection 18
 - Sanding Belt 19
 - Pressure Rollers 20
 - Start Up 20
 - Recommended Adjustments 21
- SECTION 4: OPERATIONS 22**
 - Operation Safety 22
 - Choosing Sandpaper 22
 - Table Movement 23
 - Adjusting Feed Rate 23
 - Amp Draw Meter 24
 - Sanding Workpiece 25
 - Platen Adjustment 25
- SECTION 5: ACCESSORIES 26**
- SECTION 6: MAINTENANCE 27**
 - General 27
 - Schedule 27
 - Sanding Belts 28
 - Air System 28
 - Dust and Water Traps 28



| | |
|---|-----------|
| SECTION 7: SERVICE | 29 |
| Table Calibration | 29 |
| Platen Service | 29 |
| Brake Service | 30 |
| Oscillation Timing | 31 |
| Oscillation Speed | 33 |
| Table Parallelism | 33 |
| Pressure Rollers | 34 |
| V-Belt Adjustment | 35 |
| Conveyor Belt Replacement | 36 |
| Feed Belt Tension | 38 |
| Feed Belt Tracking | 38 |
| Air System Diagram | 39 |
| Troubleshooting | 40 |
| Tool Box and Accessories Diagram | 56 |
| Tool Box and Accessories Parts List | 57 |
| Sanding Motor System Diagram | 58 |
| Sanding Motor System Parts List | 59 |
| Table Lift System Diagram | 60 |
| Table Lift System Parts List | 61 |
| Conveyor System Diagram | 62 |
| Conveyor System Parts List | 63 |
| Feed, Drum, and Pressure Roller Diagram | 64 |
| Feed, Drum, and Pressure Roller Parts List | 65 |
| Sanding Drum, and Platen Diagram | 66 |
| Sanding Drum, and Platen Parts List | 67 |
| Upper Roller System Diagram | 68 |
| Upper Roller System Parts List | 69 |
| Cabinet Assembly Diagram | 70 |
| Main Electrical Panel and Controls Diagram | 72 |
| Main Electrical Panel and Controls Parts List | 73 |
| Belt Oscillation System Diagram | 74 |
| Belt Oscillation System Parts List | 75 |
| Machine Label Diagram | 76 |
| Machine Label List | 77 |
| WARRANTY & RETURNS | 78 |



INTRODUCTION

Foreword

We are proud to offer the H2933/H2934/G0447/G0581 Wide Belt Sander. This machine is part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

We are pleased to provide this manual with the H2933/H2934/G0447/G0581 Wide Belt Sander. It was written to guide you through assembly, review safety considerations, and cover general operating procedures.

The specifications, drawings, and photographs illustrated in this manual represent the H2933/H2934/G0447/G0581 Wide Belt Sander as supplied when the manual was prepared. For your convenience, we always keep current Grizzly manuals available on our website at **www.grizzly.com**. Any updates to your machine will be reflected in these manuals as soon as they are complete.

Contact Info

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc.
c/o Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069

We stand behind our machines. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>



Control Panel Features

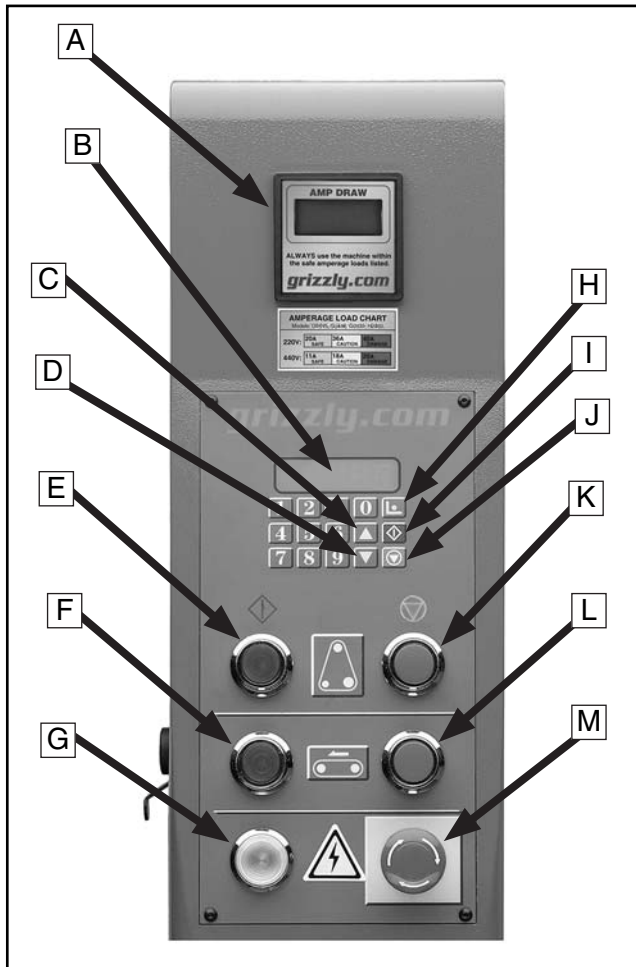


Figure 1. Control Panel.

- A. Digital Amp Draw Meter
- B. Table-Height Digital Readout
- C. Table Up Key
- D. Table Down Key
- E. Sanding Belt Start Button
- F. Conveyor Belt Start Button
- G. Power Light
- H. Table Set (Enter) Key
- I. Table Start Key
- J. Table Stop Key
- K. Sanding Belt Stop Button
- L. Feed Belt Stop Button
- M. Emergency Stop Button

External Features

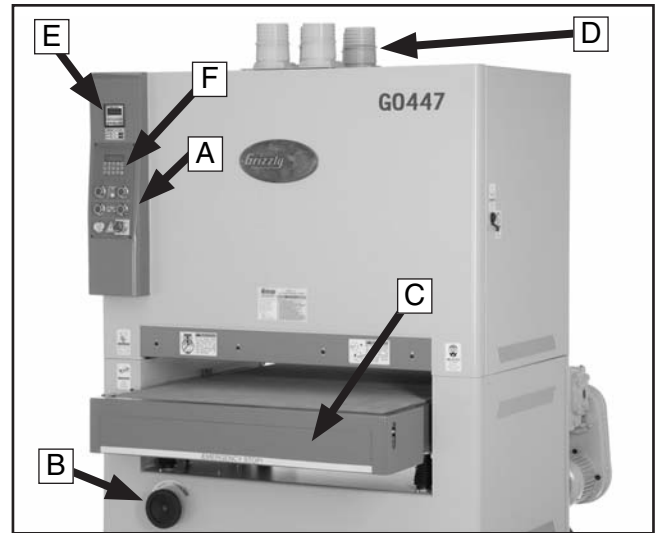


Figure 2. Front View.

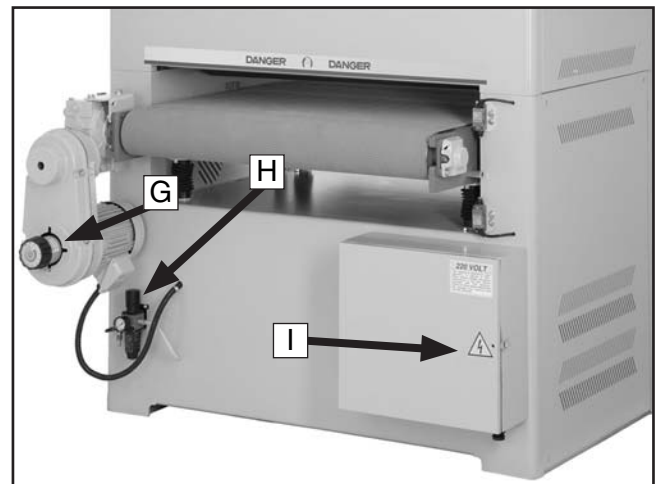


Figure 3. Rear View.

- A. Control Panel
- B. Table Height Handwheel
- C. Emergency Stop Push-Panel
- D. 4" Dust Collection Ports
- E. Amperage Load Chart
- F. Digital Table Height Key Pad
- G. Conveyor Speed Control
- H. Air Pressure Regulator
- I. Main Wiring Box



Internal Features

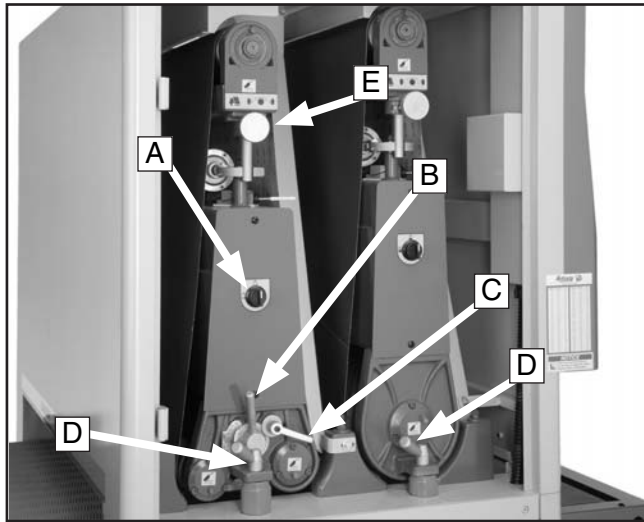


Figure 4. Inside the left access door.

- A.** Belt Tension Knob
- B.** Platen Adjustment Lever
- C.** Platen Adjustment Lock Lever
- D.** Lock Post Release Lever
- E.** Tracking Adjustment Knob

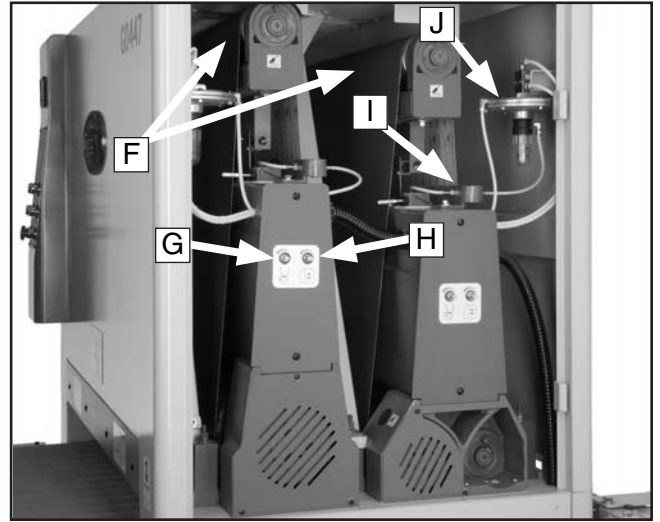


Figure 5. Inside the right access door.

- F.** Upper Rollers
- G.** Airflow Adjustment Knob
- H.** Speed Control Adjustment Knob
- I.** Air Fork and Air Jet
- J.** Diaphragm Valve Assembly





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL H2933 24" DOUBLE-HEAD WIDE-BELT SANDER

Design Type Floor Model

Overall Dimensions:

Overall Height 71½"
 Overall Width 42"
 Overall Depth 59½"
 Conveyor Height at Lowest Setting 32"
 Net Weight 2314 lbs.
 Shipping Weight 2645 lbs.
 Footprint 40" x 31"

Capacities:

Maximum Board Width 24"
 Maximum Board Thickness 6"
 Minimum Board Length 14"
 Minimum Board Thickness ¼"
 Drum Speed (Front) 3543 FPM
 Drum Speed (Rear) 2565 FPM
 Conveyor Speed 14-60 FPM
 Dust Ports Four, 4"
 Drum Diameter (Front 7.87"), (Rear 4")

Sanding Drum Motor:

Type TEFC Induction
 Horsepower 15 HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 36 / 18A
 RPM 1725 RPM
 Power Transfer to Drums Triple and Twin V-Belt

Conveyor Feed Motor:

Type TEFC Induction
 Horsepower 1 HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 3.4 / 1.7A
 RPM 1725 RPM
 Power Transfer V-Belt

Table Lift Motor:

Type TEFC Induction
 Horsepower ¼ HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 1.2 / 0.6A
 RPM 1725 RPM
 Power Transfer V-Belt

General Construction:

Cabinet Steel
 Operating Air Pressure 75 PSI
 Sanding Belt Oscillation Adjustable
 Emergency Sanding Belt Brake Air Disc Brake
 Control Panel Push Button Motor Controls, and Amp Load Meter
 Sanding Belt 24" x 60"
 Graphite Size 24" x 3.5"
 Sanding Type Drum and Platen Style

Specifications, while deemed accurate, are not guaranteed.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL H2934 37" DOUBLE-HEAD WIDE-BELT SANDER

| | |
|--|--|
| Design Type | Floor Model |
| Overall Dimensions: | |
| Overall Height | 71½" |
| Overall Width | 54" |
| Overall Depth | 59½" |
| Conveyor Height at Lowest Setting..... | 32" |
| Net Weight..... | 3086 lbs. |
| Shipping Weight | 3527 lbs. |
| Footprint | 52" x 31" |
| Capacities: | |
| Maximum Board Width..... | 36½" |
| Maximum Board Thickness..... | 6" |
| Minimum Board Length | 14" |
| Minimum Board Thickness..... | ¼" |
| Drum Speed (Front) | 3543 FPM |
| Drum Speed (Rear)..... | 2565 FPM |
| Conveyor Speed..... | 14-60 FPM |
| Dust Ports | Six, 4" |
| Drum Diameter..... | (Front 7.87"), (Rear 4") |
| Sanding Drum Motor: | |
| Type | TEFC Induction |
| Horsepower | 20 HP |
| Voltage / Phase / Cycle..... | 220V / 440V Three-Phase / 60 HZ |
| Amps | 50 / 25A |
| RPM | 1725 RPM |
| Power Transfer to Drums | Twin and Triple V-Belt |
| Conveyor Feed Motor: | |
| Type | TEFC Induction |
| Horsepower | 1 HP |
| Voltage / Phase / Cycle..... | 220V / 440V Three-Phase / 60 HZ |
| Amps | 3.4 / 1.7A |
| RPM | 1725 RPM |
| Power Transfer..... | V-Belt |
| Table Lift Motor: | |
| Type | TEFC Induction |
| Horsepower | 1/4 HP |
| Voltage / Phase / Cycle..... | 220V / 440V Three-Phase / 60 HZ |
| Amps | 1.2 / 0.6A |
| RPM | 1725 RPM |
| Power Transfer..... | V-Belt |
| General Construction: | |
| Cabinet..... | Steel |
| Operating Air Pressure..... | 75 PSI |
| Sanding Belt Oscillation | Adjustable |
| Emergency Sanding Belt Brake | Air Disc Brake |
| Control Panel..... | Push Button Motor Controls, and Amp Load Meter |
| Sanding Belt..... | 37" x 60" |
| Graphite Size..... | 37" x 3.5" |
| Sanding Type | Drum and Platen Style |

Specifications, while deemed accurate, are not guaranteed.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL G0447 37" DOUBLE-HEAD TALL WIDE-BELT SANDER

Design Type Floor Model

Overall Dimensions:

Overall Height W/Dust Ports 79"
 Overall Height W/O Dust Ports 73"
 Overall Width 53½"
 Overall Depth 59½"
 Conveyor Height at Lowest Setting 32"
 Net Weight 3197 lbs.
 Shipping Weight 3637 lbs.
 Footprint 52" x 31"

Capacities:

Maximum Board Width 36½"
 Maximum Board Thickness 6"
 Minimum Board Length 11"
 Minimum Board Thickness ¼"
 Drum Speed (Front) 3543 FPM
 Drum Speed (Rear) 2554 FPM
 Conveyor Speed 17-63 FPM
 Dust Ports Six, 4"
 Drum Diamiter (Front 7.87"), (Rear 4")

Sanding Drum Motor:

Type TEFC Induction
 Horsepower 20 HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 50 / 25A
 RPM 1725 RPM
 Power Transfer to Drums Triple V-Belt

Conveyor Feed Motor:

Type TEFC Induction
 Horsepower 1 HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 3.4 / 1.7A
 RPM 1725 RPM
 Power Transfer Twin and Triple V-Belt

Table Lift Motor:

Type TEFC Induction
 Horsepower ¼ HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 1.2 / 0.6A
 RPM 1725 RPM
 Power Transfer V-Belt

General Construction:

Cabinet Steel
 Operating Air Pressure 75 PSI
 Sanding Belt Oscillation Adjustable
 Emergency Sanding Belt Brake Air Disc Brake
 Control Panel Push Button Motor Controls, and Amp Load Meter
 Sanding Belt 37" x 75"
 Graphite Size 37.8" x 3.5"
 Sanding Type Platen Style

Specifications, while deemed accurate, are not guaranteed.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL G0581 43" DOUBLE-HEAD WIDE-BELT SANDER

Design Type Floor Model

Overall Dimensions:

Overall Height W/Dust Ports 72½"
 Overall Height W/O Dust Ports 66½"
 Overall Width 63½"
 Overall Depth 60½"
 Conveyor Height at Lowest Setting 32"
 Net Weight 3086 lbs.
 Shipping Weight 3968 lbs.
 Footprint 61" x 31½"

Capacities:

Maximum Board Width 43"
 Maximum Board Thickness 6"
 Minimum Board Length 14"
 Minimum Board Thickness ¼"
 Front Drum Speed 3543 FPM
 Rear Drum Speed 2565 FPM
 Conveyor Speed 14-63 FPM
 Dust Ports Ten, 4"
 Drum Diameter (Front) 7.87"
 Drum Diameter (Rear) 4"

Sanding Drum Motor:

Type TEFC Induction
 Horsepower 25 HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 64 / 32A
 RPM 1725 RPM
 Power Transfer to Drums Twin and Triple V-Belt

Conveyor Feed Motor:

Type TEFC Induction
 Horsepower 2 HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 6 / 3A
 RPM 1725 RPM
 Power Transfer V-Belt

Table Lift Motor:

Type TEFC Induction
 Horsepower ¼ HP
 Voltage / Phase / Cycle 220V / 440V Three-Phase / 60 HZ
 Amps 1.2 / 0.6A
 RPM 1725 RPM
 Power Transfer V-Belt

General Construction:

Cabinet Steel
 Operating Air Pressure 75 PSI
 Sanding Belt Oscillation Adjustable
 Emergency Sanding Belt Brake Air Disc Brake
 Control Panel Push Button Motor Controls, and Amp Load Meter
 Sanding Belt 43.3" x 60"
 Graphite Size 43" x 3.5"
 Sanding Type Drum and Platen Style

Specifications, while deemed accurate, are not guaranteed.



SECTION 1: SAFETY


WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

 **DANGER** Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE This symbol is used to alert the user to useful information about proper operation of the machine.

WARNING

Safety Instructions for Machinery

- 1. READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
- 2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 3. ALWAYS WEAR AN ANSI APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.
- 4. ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing damage.
- 5. WEAR PROPER APPAREL. DO NOT** wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
- 6. NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.



WARNING

Safety Instructions for Machinery

7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.
8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.
9. **MAKE WORKSHOP CHILD PROOF.** Use padlocks, master switches, and remove start switch keys.
10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power **OFF** and allow all moving parts to come to a complete stop before leaving machine unattended.
11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
12. **KEEP WORK AREA CLEAN AND WELL LIT.** Clutter and dark shadows may cause accidents.
13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.
14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY.** Make sure switch is in OFF position before reconnecting.
15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery **ON**.
18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.
19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.
20. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.
21. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
22. **DO NOT OVERREACH.** Keep proper footing and balance at all times.
23. **MANY MACHINES WILL EJECT THE WORKPIECE TOWARD THE OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."
24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.**
25. **BE AWARE THAT CERTAIN WOODS MAY CAUSE AN ALLERGIC REACTION** in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to and always wear an approved respirator.



WARNING

Additional Safety for Wide Belt Sanders

- 1. INFEEED/OUTFEED AREA.** When feeding the workpiece into the machine, keep clear of kickback path.
- 2. WORKPIECE FEEDING.** Never force the workpiece into the sander, and feed only one workpiece at a time.
- 3. CLOTHING.** Roll up or button sleeves, tie all loose clothing or hair so it will keep clear of entanglement hazards.
- 4. NARROW WORKPIECES.** Never sand workpieces narrower than $\frac{1}{8}$ ".
- 5. THIN WORKPIECES.** Never sand workpieces thinner than $\frac{1}{8}$ ".
- 6. SHORT WORKPIECES.** Never sand workpieces shorter than 14".
- 7. HANDS.** Never place hands near, or in contact with, sanding drums or conveyor belt during operation.
- 8. MAINTENANCE.** Perform machine inspections and maintenance service at the appropriate time intervals.
- 9. POWER AND AIR DISCONNECT.** Unless specifically stated in the manual, always disconnect the power source and air from the machine when performing maintenance, adjustments, or assembly. Always read and follow specific safety instructions for each section.
- 10. UNATTENDED MACHINE.** Never leave the machine running unattended.
- 11. SANDPAPER.** Replace sanding belt when it becomes worn or damaged.
- 12. FOREIGN MATERIAL.** Always inspect workpiece for nails, staples, knots, and other imperfections that could be dislodged and thrown from the machine during sanding operations.
- 13. DUST COLLECTION.** Never operate the sander without an adequate dust collection system in place and running.
- 14. ALLERGIES.** Certain woods may cause an allergic reaction in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to and always wear an approved respirator.
- 15. ACCESS DOORS.** Never perform sanding operations when the side access doors are open.
- 16. UNDERSTAND INSTRUCTIONS.** Never allow unsupervised or untrained personnel to operate the machine. Make sure any instructions you give in regards to machine operation are approved, correct, safe, and clearly understood.

WARNING

Unfamiliarity with this manual could result in serious personal injury. Spend a sufficient amount of time becoming familiar with the contents of this manual, including all the safety warnings.

WARNING

No list of safety guidelines can be complete. Operating this machinery may require additional safety precautions specific to your shop environment. Failure to use reasonable caution while operating this machine could result in serious personal injury.



SECTION 2: CIRCUIT REQUIREMENTS

220V/440V Connection

Hard wire this machine to your power panel that can safely supply power to your machine, and has the proper overload protection, and has a locking shut-off lever (**Figure 6**). If you are unsure about electrical wiring, consult a qualified electrician before attempting any wiring.

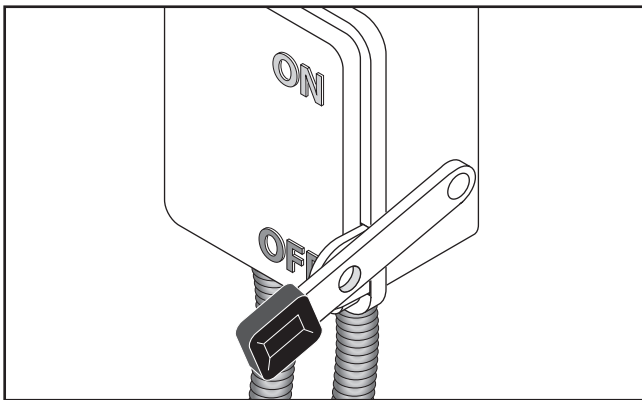


Figure 6. Locking Shut-Off Lever.

Extension Cords

Do not use an extension cord with 220V/440V machinery. An extension cord increases the risk of electrocution and fire. Instead, position your equipment near the power supply to eliminate the extension cord requirement.

Grounding

| | |
|--|---|
| | <p>⚠ WARNING</p> <p>Electrocution or fire may result if machinery is incorrectly grounded or the power supply violates local and state codes. Contact a qualified electrician for safe wiring practices!</p> |
|--|---|

Amperage Loads

The following list outlines the electrical phase and voltage required to operate the various sander models, as well as the amperage draw of their motors. **Note:** If you do not have three-phase power available, you will have to install a phase converter such as the Grizzly Phase Converter.

Amperage Draw Specifications:

H2933—220V, Single-Phase ~40 Amp

| | |
|--------------------------|----------|
| 15 HP Sanding Motor..... | 36 Amps |
| 1 HP Feed Motor..... | 3.4 Amps |
| ¼ HP Table Motor..... | 1.2 Amps |

H2933—440V, Three-Phase ~20 Amp

| | |
|--------------------------|----------|
| 15 HP Sanding Motor..... | 18 Amps |
| 1 HP Feed Motor..... | 1.7 Amps |
| ¼ HP Table Motor..... | 0.6 Amp |

H2934/G0447—220V, Single-Phase ~50 Amp

| | |
|--------------------------|----------|
| 20 HP Sanding Motor..... | 50 Amps |
| 1 HP Feed Motor..... | 3.4 Amps |
| ¼ HP Table Motor..... | 1.2 Amps |

H2934/G0447—440V, Three-Phase ~25 Amp

| | |
|--------------------------|----------|
| 20 HP Sanding Motor..... | 25 Amps |
| 1 HP Feed Motor..... | 1.7 Amps |
| ¼ HP Table Motor..... | 0.6 Amp |

G0581—220V, Single-Phase ~60 Amp

| | |
|--------------------------|----------|
| 25 HP Sanding Motor..... | 64 Amps |
| 2 HP Feed Motor..... | 6 Amps |
| ¼ HP Table Motor..... | 1.2 Amps |

G0581—440V, Three-Phase ~25 Amp

| | |
|--------------------------|---------|
| 25 HP Sanding Motor..... | 32 Amps |
| 2 HP Feed Motor..... | 3 Amps |
| ¼ HP Table Motor..... | 0.6 Amp |



440V Connection

To connect this machine to 440V three-phase, you must purchase two overload relays. Each machine model may require unique relays, so refer to **440 Conversion Relays** on **Page 73** for the relay part numbers.

If you do not have three-phase power available for your wide belt sander, you must install a phase converter such as a Grizzly Phase Converter.

Note: When using a phase converter, the power from the manufactured power leg (sometimes called the wild wire) can fluctuate. Connect the manufactured power leg to the S terminal to prevent damage to the transformer. The wire from the S terminal can handle some fluctuation because it goes directly to the motor. The power going to the R and T terminals goes to the transformer and must be consistent to prevent damage.

To wire the sander to 440V:

1. DISCONNECT THE SANDER FROM THE POWER SOURCE!
2. Open the electrical box located on the back of the machine.
3. On the transformer, remove the wire connected to the 220V terminal for your model of sander, and connect it to the 440V terminal as shown in **Figures 7**.

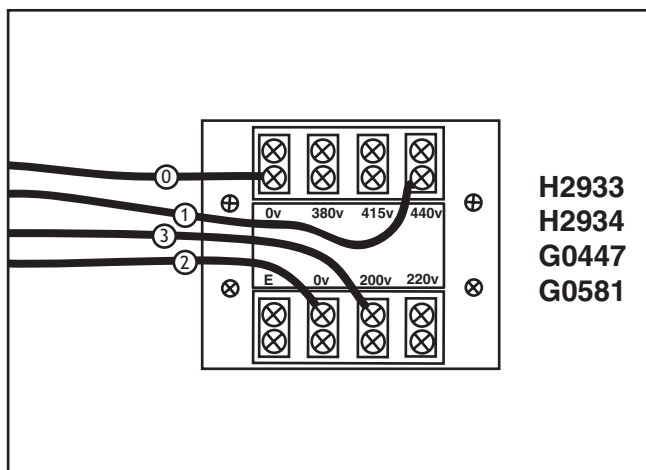


Figure 7. 440V connection.

4. Refer to **Figure 8** and find the power panel on your machine.
5. Swap out the applicable thermal relay at the locations shown in **Figure 8**, and set it to the overload values listed.

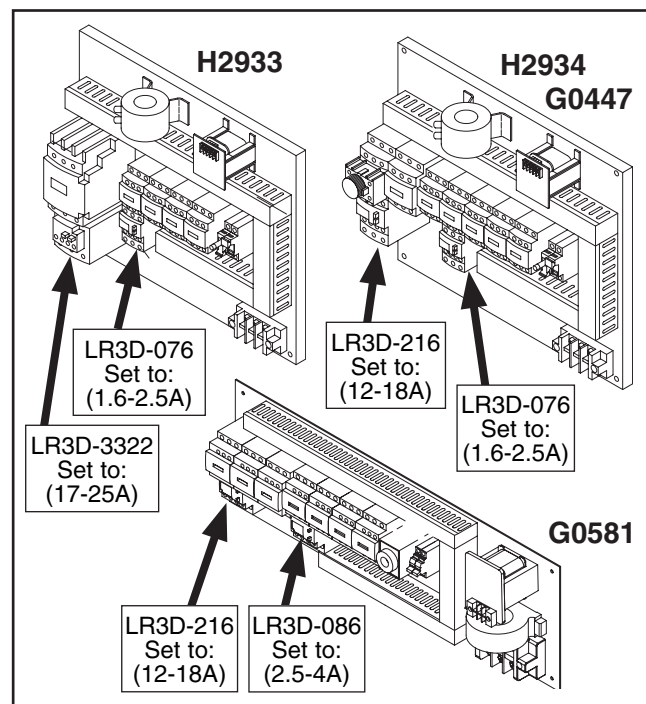


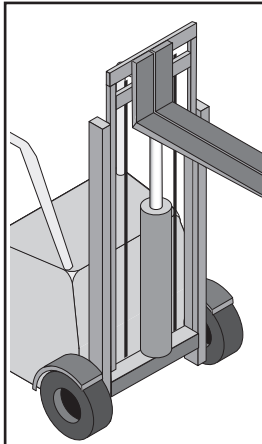
Figure 8. Overload relays.

6. Wire the sanding belt, conveyor belt, and table elevation motors as shown on the diagrams on the inside of each motor wire cover, or refer to **Motor Wiring** on **Page 55**.



SECTION 3: SET UP

Unpacking



⚠ WARNING

This sander is a heavy machine weighing in at over 2000 lbs. Personal injury can occur if the machine is moved without appropriate machinery. Use a crane or forklift when moving or lifting the machine.

Your wide belt sander was carefully packed when it left our warehouse. If you discover the machine is damaged after you have signed for delivery, please immediately call Customer Service at (570) 546-9663 for advice.

Save the containers and all packing materials for possible inspection by the carrier or its agent. Otherwise, filing a freight claim can be difficult.

When you are completely satisfied with the condition of your shipment, you should inventory the contents.

NOTICE

A parts diagram and parts list are located near the end of the manual. Use the diagram and list to identify missing parts or to supplement the assembly instructions provided in this manual.

Inventory

| Crate contents, (Figure 9). | Qty |
|---|-----|
| A. Sanding Unit (Not Pictured) | 1 |
| B. Dust Port 4" (H2933, H2934, G0447) | 6 |
| Dust Port 4" (G0581)..... | 10 |
| C. Sanding Belt 100 Grit..... | 1 |
| D. Sanding Belt 180 Grit..... | 1 |
| E. Platen Graphite Flap | 2 |
| F. Platen Felt | 1 |
| G. Tool Box | 1 |
| — Phillips Head Screwdriver #2..... | 1 |
| — Standard Screwdriver #2..... | 1 |
| — Open-End Wrench 8/10mm..... | 1 |
| — Open-End Wrench 12/14mm..... | 1 |
| — Open-End Wrench 17/19mm | 1 |
| — Metric Hex Wrench Set 10 Pcs..... | 1 |
| — Door Key | 2 |
| — Ceramic Limit Switch Rub Rod..... | 2 |
| — Flexible Grease Gun Extension..... | 1 |
| — Platen Removal Tool | 1 |

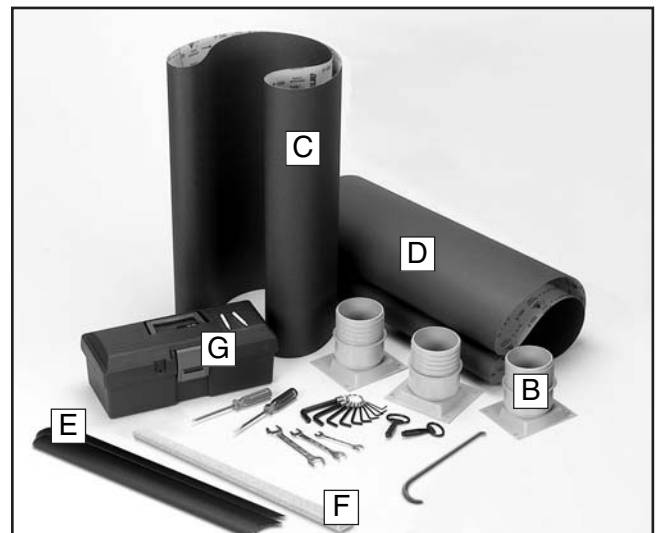


Figure 9. Parts layout.

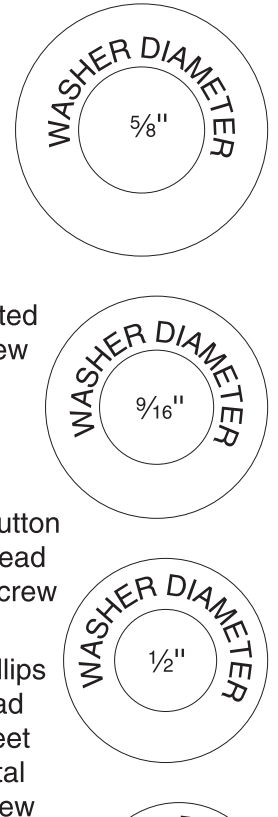
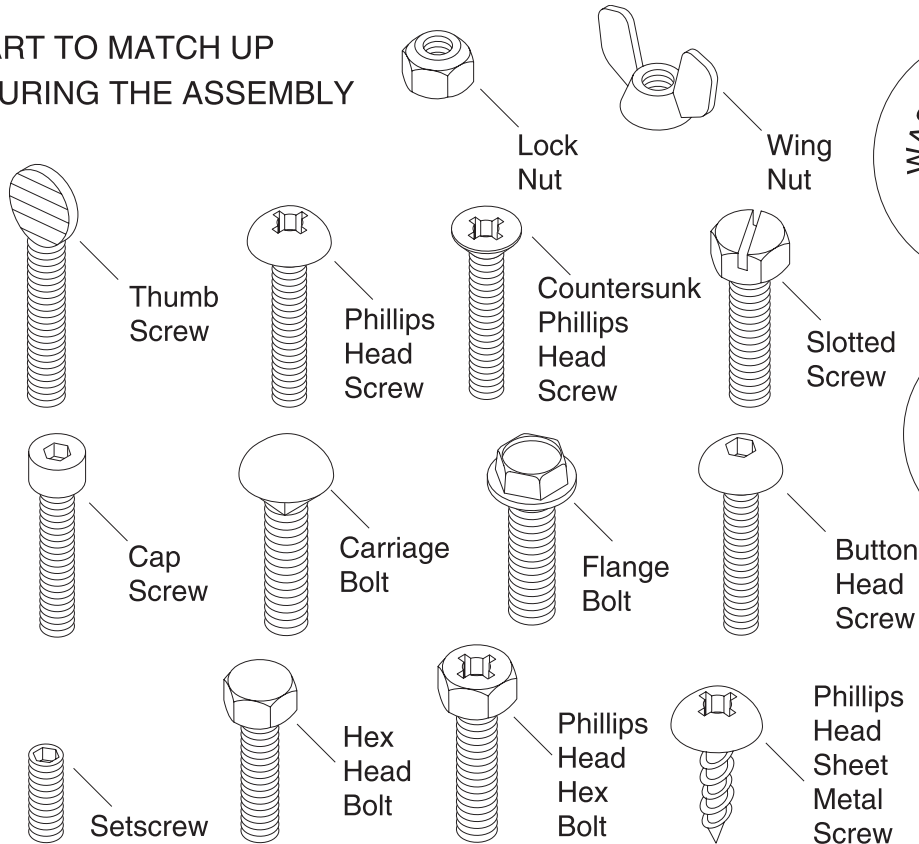


Hardware Chart

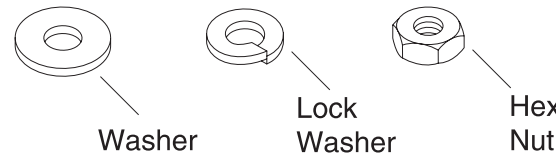
USE THIS CHART TO MATCH UP
HARDWARE DURING THE ASSEMBLY
PROCESS!

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE

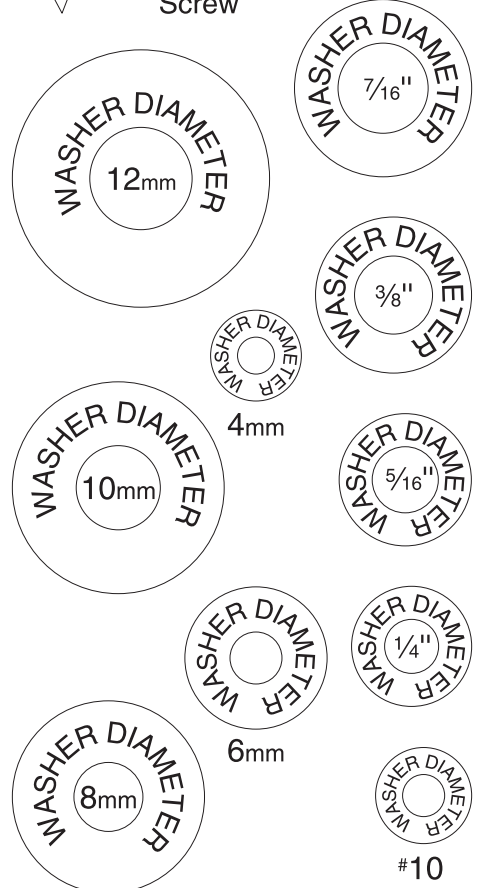
- #10
- 1/4"
- 5/16"
- 3/8"
- 7/16"
- 1/2"



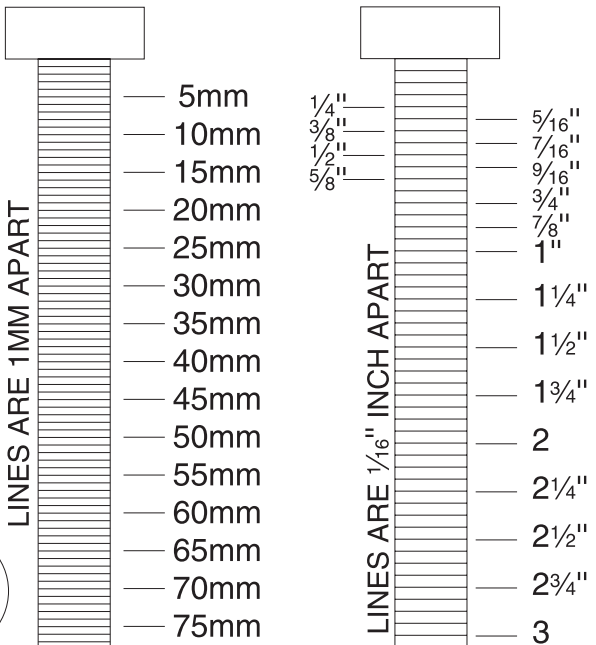
- 5/8"
- 4mm



WASHERS ARE MEASURED BY THE INSIDE DIAMETER




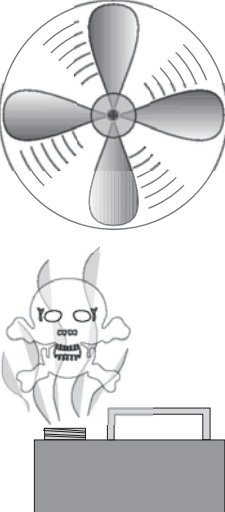
- 6mm
- 8mm
- 10mm
- 12mm
- 16mm



Clean Up

Any unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Degreaser. To clean thoroughly, some parts may need to be removed. **For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated.** Avoid chlorine-based solvents as they may damage painted surfaces should they come in contact.

| | |
|---|---|
|  | <p>!WARNING Gasoline and petroleum products have low flash points and could explode if used to clean machinery. DO NOT use gasoline or petroleum products to clean the machinery.</p> |
|---|---|

| | |
|---|--|
|  | <p>!WARNING Lack of ventilation while using solvents could cause serious personal health risks, fire, or environmental hazards. Always work in a well ventilated area to prevent the accumulation of dangerous fumes. Supply the work area with a constant source of fresh air.</p> |
|---|--|

Site Considerations

Floor Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some shop floors may require additional reinforcement to support both the machine and operator.

Working Clearance

Working clearances can be thought of as the distances between machines and obstacles that allow safe operation of every machine without limitation. Refer to the **Machine Data Sheet** for dimensions of your machine. Consider existing and anticipated machine needs, size of material to be processed through each machine, and space for auxiliary stands and/or work tables. Also, consider the relative position of each machine to one another for efficient material handling. Be sure to allow yourself sufficient room to safely run your machines in any foreseeable operation and keep dust collection hoses off the floor and out of the way.

Lighting

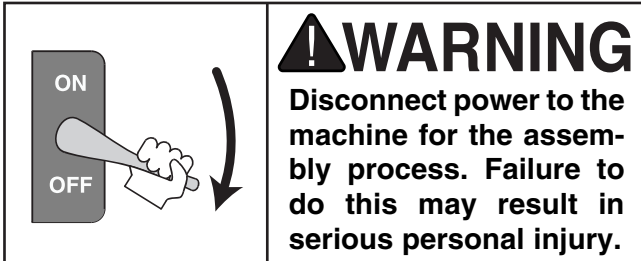
Lighting should be bright enough to eliminate shadows and prevent eye strain. Electrical circuits should be dedicated or large enough to handle combined motor amp loads. Be sure to observe local electrical codes for proper installation of new lighting or circuits.

| | |
|--|--|
|  | <p>!WARNING Unsupervised children and visitors entering a shop could suffer serious personal injury. Ensure child and visitor safety by keeping all entrances to the shop locked at all times. DO NOT allow unsupervised children or visitors in the shop at any time.</p> |
|--|--|



Beginning Assembly

Complete the assembly in the order provided in this manual. Then read the rest of the manual before attempting any type of sanding operation. **Your safety is important! Please follow the warnings below during this entire section:**



Air Line Installation

To install the air line:

1. Connect the hose from your air compressor to the air inlet (**Figure 10**) on the regulator.

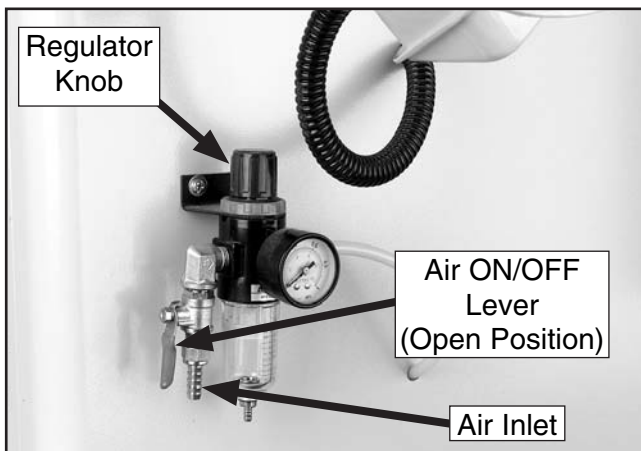


Figure 10. Air inlet located on regulator.

2. Make sure the red handle on the regulator is in the open position (parallel with the air inlet).
3. Lift the regulator knob (**Figures 10 and 11**) and turn it until the air pressure gauge reads 75 PSI. **Note:** Turn the knob clockwise to increase the air pressure and counterclockwise to lower the air pressure.
4. Push the regulator knob down until it snaps.

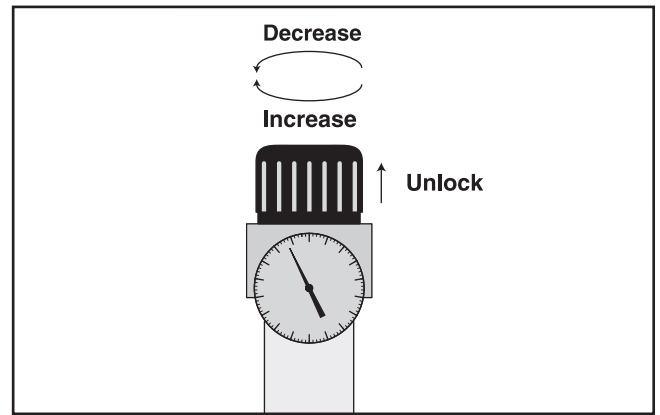


Figure 11. Regulator knob.

Dust Collection

An efficient and clean dust collection system is essential to the proper function of the sander. Ensuring a healthy work environment is also dependent upon cleaning and maintaining your dust collection system. For the H2933/H2934/G0447 we recommend a minimum of: 2400 CFM, and for the G0581: 4000 CFM is recommended.

To hook up a dust collection system:

1. Install the dust ports (**Figure 12**) to the mounting locations on the top of the sanding unit with the supplied M6-1 x 10 Phillips head screws.

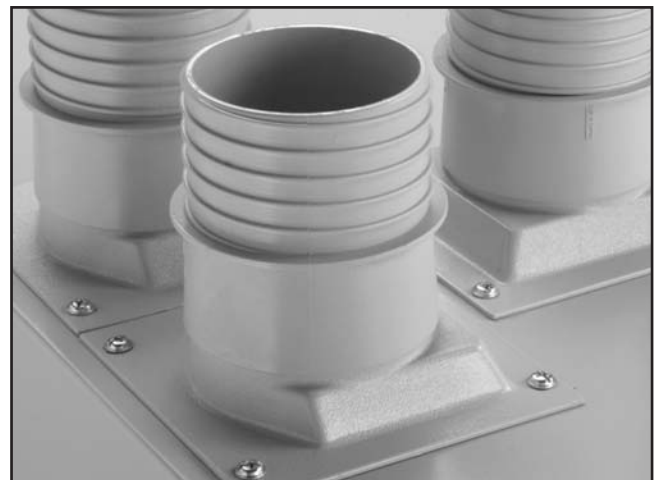


Figure 12. Typical three-port configuration.

2. Using 4" hose clamps, secure the hoses from your dust collection system to the dust ports.



Sanding Belt

To install the sanding belt:

1. DISCONNECT THE SANDER FROM THE POWER SOURCE!
2. De-activate the belt tension piston by turning the belt tension knob (**Figure 13**).
3. Remove the lock post release lever (**Figure 13**) by turning it counterclockwise $\frac{1}{2}$ turn and pulling it up and out of the mounting hole.
4. Remove the spacer block (**Figure 13**).

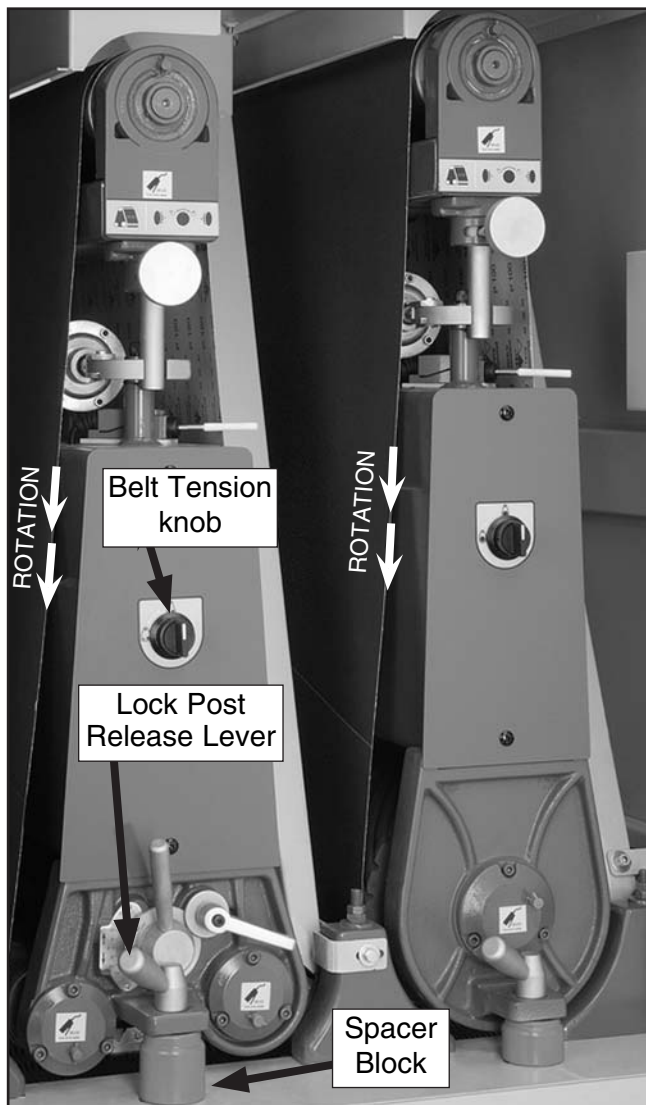


Figure 13. Components used when changing a sanding belt.

5. Making sure the rotation arrows on the sanding belt point the same direction as those shown in **Figure 13**, install the sanding belt by starting first on the upper roller, and then the lower roller.

Note: The sanding belt must be centered between the limit switches and the edge of the sanding belt must be between tongs of the oscillation controller as shown in **Figure 14**. Damage to the sanding belt could occur if the sander is turned **ON** before the sanding belt is correctly positioned.

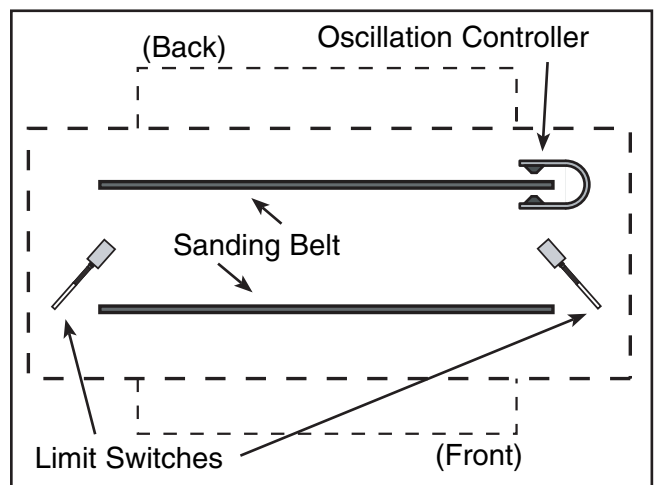


Figure 14. Sander Outline (Top View). Proper position of belt between the limit switches.

NOTICE

The directional arrow on the back of the sanding belt must be pointing in a counterclockwise direction during installation. Failure to install the sanding belt correctly could result in damage to the sanding belt or the sander itself.

6. Replace the spacer block and tighten down the lock handle bolt.
7. With your hands clear of all moving parts, tension the belt by turning the belt tension knob.



Pressure Rollers

The pressure rollers have been set at the factory, but for safety, you should verify that they are set below the level of the sanding roller.

WARNING

It is absolutely essential to keep the pressure rollers set below the level of the sanding roller. If the pressure rollers are even, or higher than the sanding roller, the wood **WILL** be propelled from the sander at a high rate of speed. This situation could cause serious kick-back injury.

To check the pressure roller height:

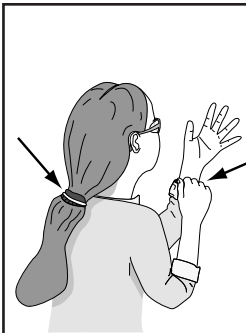
1. DISCONNECT THE SANDER FROM THE POWER SOURCE!
2. Place a piece of scrap wood of uniform thickness across the table so it spans both the front and the rear pressure rollers at the same time.
3. With the air pressure connected and the sanding belt installed and tensioned, manually raise the table and verify that the board touches both pressure rollers before it touches the sanding belt.

Note: If the board does not touch both pressure rollers before it touches the sanding belt, then the pressure rollers must be adjusted before operation. See "**Pressure Rollers**" on **Page 34** for step-by-step instructions.

Start Up

WARNING

Serious personal injury could result if the machine is connected to the power source during assembly or adjustment. Wait until the machine is turned off, unplugged, and all working parts have come to a complete stop before you attempt to assemble or adjust the machine!



WARNING

Loose hair and clothing could get caught in machinery causing serious personal injury. Keep loose clothing rolled up and long hair tied up and away from machinery.



WARNING

Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses during start up.

Before starting the machine:

1. Read this manual and make sure you take all safety precautions before operating this machine.
2. Make sure the machine is connected to an air compressor and the pressure gauge reads 75 PSI.
3. Make sure all tools or foreign objects have been removed from the conveyor surface, the top of the machine, and the inside of the machine.
4. Make sure all the wiring is correct.



To start the machine:

1. **Wear safety glasses and respirator at all times when running the machine!**
2. Connect the machine to the power source.
3. Press the TABLE UP and TABLE DOWN keys. The table should go up and down smoothly.

Note: Make sure the table moves in the same direction as the button description. If not, then the power needs to be disconnected and any two power wires need to be switched at the circuit breaker in the electrical box. If using a phase converter, switch the R and T wires.

4. Press the FEED BELT START and FEED BELT STOP buttons. The feed belt should start, run, and stop smoothly.
5. Press the SANDING BELT START and SANDING BELT STOP buttons. The sanding belt should start, run, and stop smoothly.

The machine should run smoothly, with little or no vibration or rubbing noises. Strange or unnatural noises should be investigated and corrected before operating the machine further.

If the machine seems to be running correctly, let it run for a short time to ensure that the moving parts are working properly with no excessive vibration. DO NOT operate the machine if problems cannot be corrected.

If you cannot locate the source of unusual noises, refer to **Troubleshooting**, and feel free to contact our Technical Support Department at (570) 546-9663.

Recommended Adjustments

For your convenience, the adjustments listed below have been performed at the factory and require no further adjustment. However, we recommend that you verify that the adjustments are correct and to your satisfaction.

Recommended adjustment checklist:

- Table Calibration, Page 29.
- Feed Belt Tension, Page 38.
- Feed Belt Tracking, Page 38.
- Air Regulator to 75 PSI, Page 28.
- Oscillation Timing, Page 31.
- Oscillation Speed, Page 33.
- Pressure Rollers, Page 20.
- Table Parallelism, Page 33.
- V-Belt Adjustment, Page 35.



SECTION 4: OPERATIONS

Operation Safety

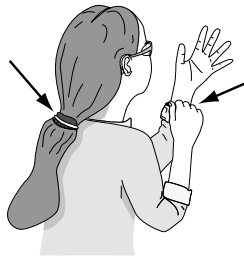
Your safety is important! Please follow the warnings below during this entire section:

WARNING

To avoid serious personal injury, read and become familiar with the entire instruction manual before using this wide belt sander.

WARNING

Damage to your eyes, lungs, and ears could result from failure to wear safety glasses, a dust mask, and hearing protection while sanding with this machine.



WARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing rolled up and long hair tied up and away from machinery.

Choosing Sandpaper

The grit you choose will depend on the type of work, the species of wood and the stage of finishing. Below is a chart that groups abrasives into different categories and shows which grits fall into each-one. We recommend using aluminum oxide sanding belts for the best results.

| Grit | Type |
|---------|--------|
| 60 | Coarse |
| 80-100 | Medium |
| 120-150 | Fine |

The general rule of thumb is to sand a workpiece with progressively higher grit numbers, with no one grit increase of more than 50; however, the type of wood and desired finish will determine the best grit to use.



Table Movement

Table height can be adjusted manually or with the digital key pad and motor (see **Figure 15**).

Manual Table Movement: Turn the handwheel located under the front of the infeed table for manual table positioning.

Motorized Table Movement: Press the TABLE UP or TABLE DOWN key once for motorized table positioning in 0.005" (0.1mm) increments.

Numerical Key Pad: Enters the position of sanding depth.

Metric or Standard Key: Press and hold the SET button for 3 seconds to calibrate display at the current board thickness; or press and hold key for 10 seconds to toggle the display between metric and standard measurement.

Table Start Key: Moves table to a preset sanding depth.

Table Stop Key: Stops table movement immediately.

Digital Display: Shows final table sanding depth.

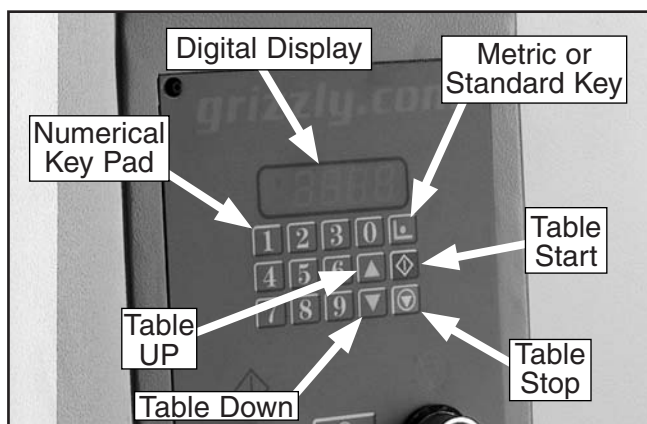


Figure 15. Keys for adjusting the table height.

NOTICE

The thickness gauge is pre-calibrated from the factory; however, correct calibration should be verified.

Adjusting Feed Rate

The dial attached to the side of the feed belt gear box (**Figure 16**) adjusts the feed rate of the sander.

Note: Never adjust the feed rate dial unless the conveyor belt is running, otherwise you can damage the control.

Changing Feed Rate: Turn the dial clockwise to decrease the feed rate and counterclockwise to increase it.

Determining Ideal Feed Rates: Softwoods typically require a faster feed rate than hardwoods; however, there is no definitive rule to follow when determining the best feed rate. As a general rule, always start with the slowest feed rate and work your way up. We always recommend testing the feed rate using scrap wood similar to your workpiece. Be sure to monitor the amperage meter when adjusting the feed rate. Decrease the feed rate if the load begins to slow the motor RPM.



Figure 16. Feed rate dial.



Amp Draw Meter

The amperage draw meter (**Figure 17**) is located above the control panel. Use the meter to monitor the amperage draw on the machine while performing sanding operations.

As a general rule, always start with a small load and work your way up. **DO NOT** work your machine to its maximum load, where you can hear the motor lose RPM; instead, make multiple passes or install a coarser grit paper.

Amp load will be directly affected by many factors such as feed rate, depth of cut, wood type, sandpaper grit, and workpiece width. If the amp load is in the red load range, the machine is overloaded and motor damage will occur. Keep the amp load in the green range during operation.

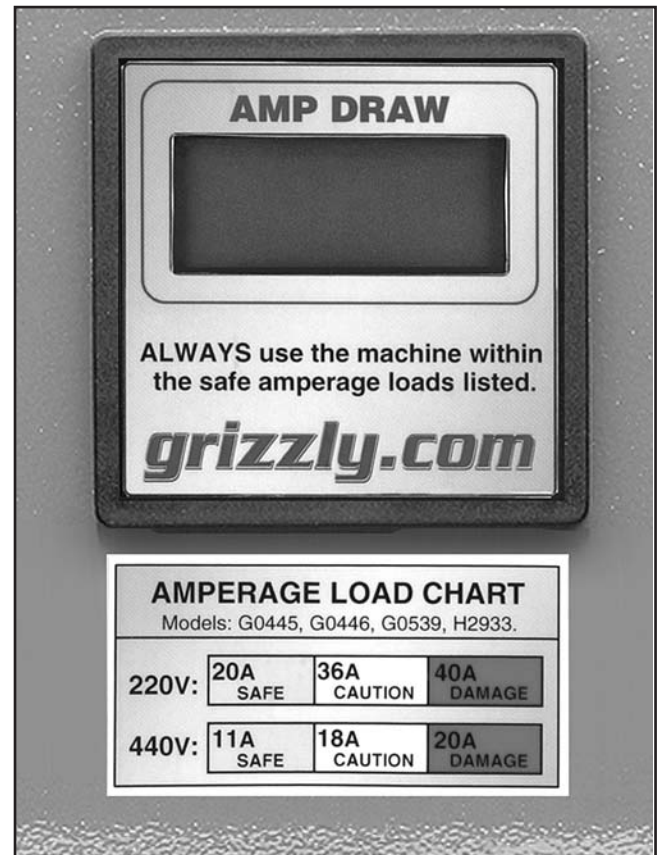


Figure 17. Typical amp draw meter and load chart.

NOTICE

DO NOT VOID WARRANTY! Keep the amp draw within the **GREEN** load range shown on the **AMP LOAD CHART**. If you operate the sander in the **RED** load range, capacitor or motor failure will occur and will not be covered under warranty.



Sanding Workpiece

Typically, no more than 0.5mm (approx. $\frac{1}{64}$ ") of material is removed during each pass. Attempts to remove too much material can cause jamming, wood burning, rapid paper wear or tearing, poor finish, short motor life, and belt slippage.

The following is the correct sanding operating procedure:

1. Put on safety glasses, a dust mask, and hearing your protection!
2. Turn **ON** the dust collector.
3. On the initial pass, set the table to approximately 0.25" greater than the thickness of the workpiece.

Note: This initial pass setting reduces the chance of overloading the sander on undetected high points on the workpiece.

4. Continue to raise the table 0.0625" between each successive pass until the sander begins to sand the workpiece.

NOTICE

It may be necessary to send wide stock through the sander two or three times between table height adjustments. This reduces the likelihood of burning the wood if there is a high spot.

Platen Adjustment

Your sander is equipped with an adjustable felt platen and graphite slip for those extra sensitive sanding operations. The platen position allows for 3 basic types of sanding. These different positions can be adjusted by rotating the height lever shown in **Figure 18**.

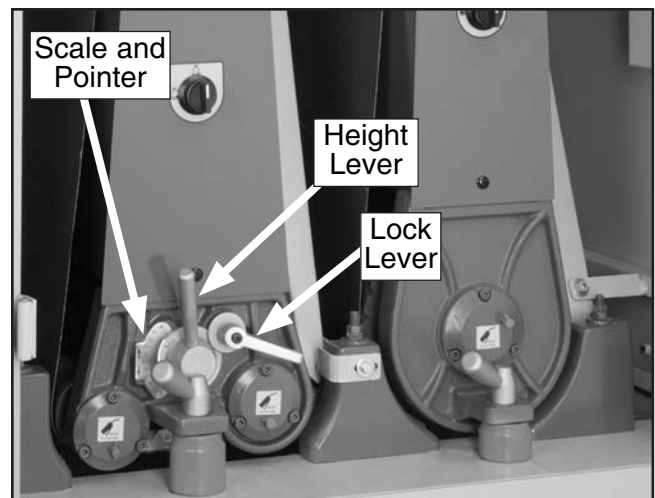


Figure 18. Platen height controls.

The three basic platen positions:

Platen Up: The platen is raised above the level of the sanding rollers. This position allows the front roller to remove large amounts of material quickly, but leaves a rough finish. The best belt grit for this position is #100 or coarser.

Platen Even: The platen is set even with the sanding rollers. The rollers work together with the platen to produce intermediate/final finishing. The best belt grit for this position is #100-#180.

Platen Down: The platen is lowered below the sanding rollers. The majority of the work is accomplished by the platen pressure on the workpiece. The result is a smooth, flat finish. The best belt grit for this position is #180 or finer. Avoid lowering the platen more than 0.2 mm below the sanding belt rollers, or you will prematurely wear the platen.

Note: The platen scale is broken down in millimeter increments.



SECTION 5: ACCESSORIES

H3741 30 HP Rotary Phase Converter

Add 3-phase, multi-motor capability to your single-phase electrical supply. Operate single or multiple motors, transformers, and resistance loads at 100% power and 95% efficiency while saving big dollars at cheaply metered, single-phase electrical rates. Complete step by step instructions are furnished along with complete wire and fusing requirements for various motor loads. Each model operates up to twice its nameplate rating in a mixed-motor load. On heavily loaded or hard-start applications, such as high-speed geared-head lathes and air conditioning compressors, the nameplate rating of the converter you choose should be 2 to 3 times the HP of the most heavily loaded motor. See the individual 3-phase machine pages for phase converter recommendations. For application assistance, please call our technical support at (570) 546-9663.



Figure 19. Rotary phase converter.

H2845 Cleaning Pads

Cleaning pads are the perfect accessory for wide belt sanders. Simply set the conveyor table to height and feed the pad through to “unload” a dirty sanding belt. Regular cleaning greatly increases the lifespan of sanding belts. Check with the current Grizzly catalog or www.grizzly.com for more details.

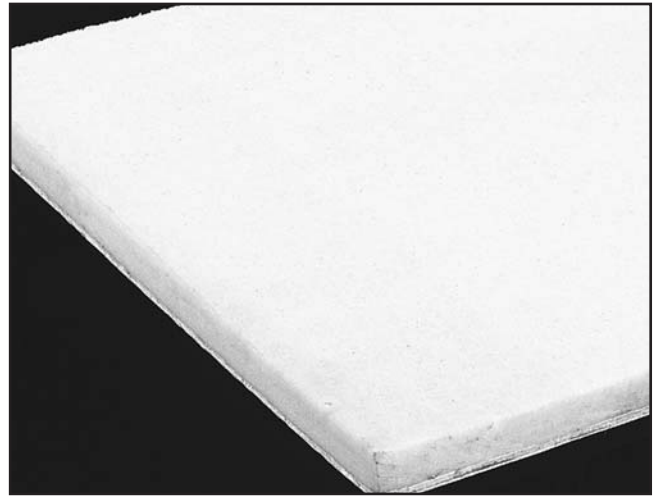


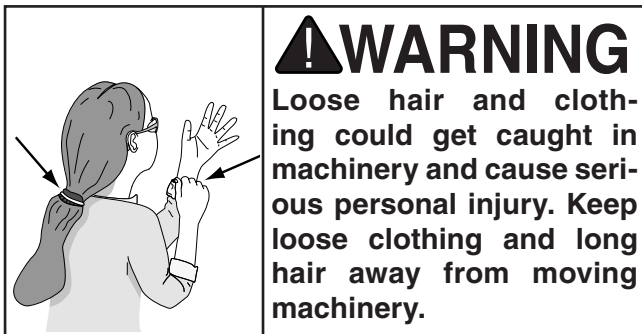
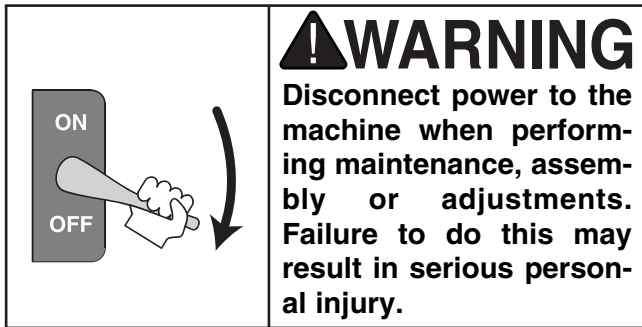
Figure 20. Sanding belt cleaning pad.



SECTION 6: MAINTENANCE

General

Your safety is important! Please follow the warnings below during this entire section:



Schedule

The following items should be checked each time the sander is used:

- Loose mounting bolts.
- Damaged sanding belt.
- Worn or damaged wires.
- Water collection cups filled with water.
- Dust trap.
- Safety features.
- Any other condition that could hamper the safe operation of this machine.

Weekly

Grease the grease fittings located on the feed belt roller axles and the sanding belt roller axles. They are identified with yellow labels.

Monthly

Apply a generous amount of grease to the table elevation screws. Be sure to recover the adjustment screws with the dust covers when finished.

Remove the lower side panel to access the table lifting mechanism. Apply grease to the chain and gears associated with the table lifting mechanism. Be careful to not get grease on the V-belts. This could cause them to slip off of the pulleys.

After the First 100 Hours

The oil inside the conveyor gear reducer should be replaced after the first 100 working hours of operation. We recommend 90 Wt. gear oil.

Every 2500 Hours

After the first conveyor gear reducer oil change, replace the oil after every 2500 working hours of operation. We recommend 90 Wt. gear oil.



Sanding Belts

You can greatly increase the lifespan of your sanding belts if you clean them often. As mentioned on **Page 26**, cleaning pads are the fastest way to remove saw dust build-up.

Air System

The air system is durable and reliable; however, components do wear with age. If you suspect that an item in your air system may be having problems, see the **Air System Diagram** on **Page 39**.

- Adjust regulator to 75 PSI.
- Carefully inspect all air lines for cracks, tears or hardening. Replace faulty hoses.
- Check the air connections for leaks. A small amount of soapy water in a questionable area will bubble if there is a leak.
- Make sure lines are not clogged. Remove a questionable line and blow through it as a test.

CAUTION

If a component in the air system is malfunctioning, bleed all air from the system, and fix the problem before you resume sanding.

Dust and Water Traps

There are three traps on this wide belt sander. One water trap is attached to the bottom of the air regulator, and two dust traps are attached on the air diaphragm assemblies. Cleaning is easy, with the system under air pressure, you can push the lower drain valve and empty regulator water trap (**Figure 21**). Replace the internal white moisture filters yearly. To empty the dust trap bowls, relieve the air pressure and then unscrew and empty the bowls (**Figure 22**). DO NOT allow the water trap and dust bowls to become full.

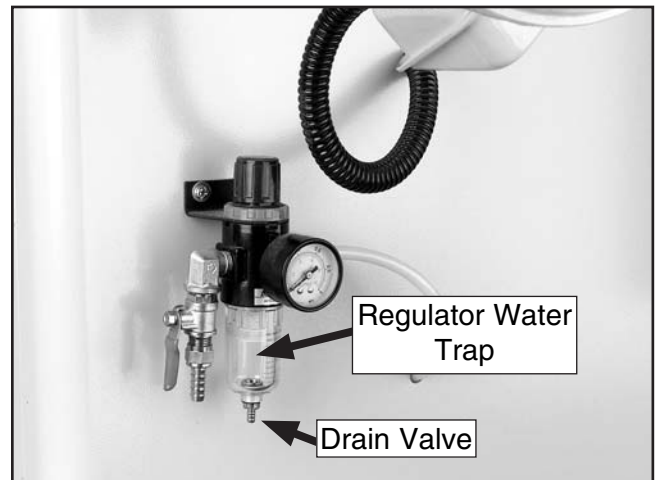


Figure 21. Water trap on the regulator.

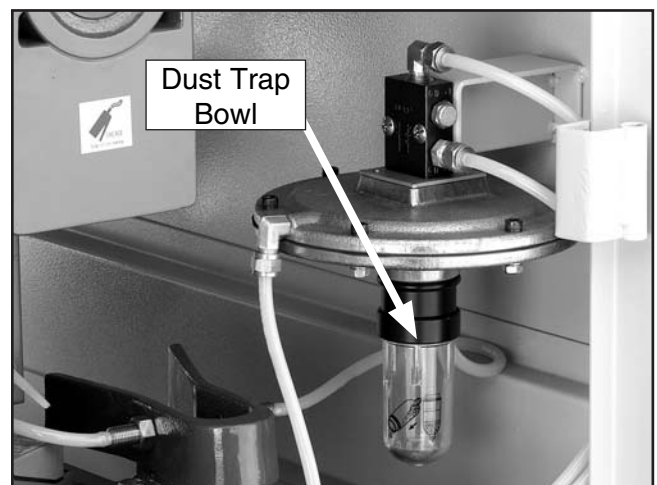


Figure 22. Unscrew the clear canister to empty the air line dust trap.



SECTION 7: SERVICE

Table Calibration

NOTICE

The digital thickness gauge has been calibrated at the factory and should require no further adjustment. However, we recommend verifying its accuracy.

Use the first board fed through the sander to test the accuracy of the digital thickness gauge.

To calibrate the digital thickness scale:

1. Using a properly set-up planer, plane a board to uniform thickness.
2. Lower the sander table far enough to place the planed board under the sander roller.
3. Manually raise the table until the board just touches the sanding roller.
4. Remove the board without changing the table height. This ensures the table will be properly adjusted for the first sanding pass.
5. Run the board through the sander several times at the initial height setting. Manually raise the table 0.020" and pass the board through the sander several more times. Monitor the amperage meter and the resulting load on the sander.
6. Measure the thickness at various points around the board using a precise micrometer or set of calipers. Continue sanding the board at that height until the average thickness measurement is within ± 0.003 ".
Note: These final passes should be done without adjusting the table height. This ensures the most consistent average thickness.
7. Observe the digital display read-out, it should indicate the average thickness of the sanded wood.


—If it does, the sander is properly calibrated and accurate to the nearest 0.005".

—If it does not, you must recalibrate the digital thickness scale.

To recalibrate the digital thickness scale:

1. Without moving the table height, enter the numerical measurement of the average thickness of the sanded wood into the digital key pad on the control panel.

Note: The average thickness of the sanded wood should now be flashing on the digital read-out.

2. Press and hold the  key until the display stops flashing. The sander is now correctly calibrated.

Platen Service

To replace the platen felt and graphite pad:

1. DISCONNECT THE SANDER FROM THE POWER SOURCE!
2. Open the left access door, and use the platen tool, as shown in **Figure 23**, to remove the platen.
3. Replace platen felt pad and graphite pad.
4. Reinsert the platen until it stops.
5. Close the access door.



Figure 23. Removing platen.



Brake Service

| Tools Needed: | Qty |
|-------------------------------|-----|
| 14mm Open End Wrench | 1 |
| Small Snap Ring Pliers | 1 |
| 6mm Hex Wrench..... | 1 |
| #2 Phillips Screwdriver | 1 |

Eventually the brake pads will wear out. Checking and replacing these is a simple project that can be done in the shop, with the exception of having the rotor resurfaced on a lathe.

To check the brake pads:

1. **Disconnect the sander from the power source and remove air pressure completely!**
2. Remove the four screws that secure the access panel on the right-hand side of the machine.
3. The brake caliper is located underneath the rotor in **Figure 24**, which is attached to the motor arbor.

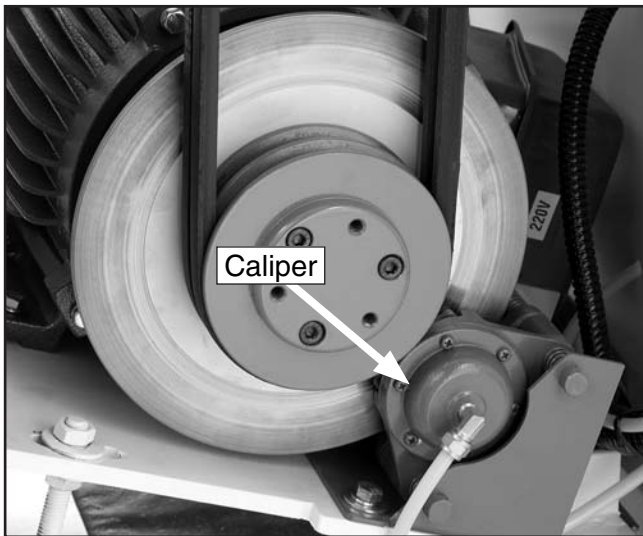


Figure 24. Disc brake.

4. The brake pads consist of a metal plate with a composite pad. With a fine ruler, measure the thickness of the composite pad only. If one of the pads is below $\frac{1}{8}$ " (approx. 3mm), replace both.

To replace the brake pads:

1. **Disconnect the sander from the power source and remove air pressure completely!**
2. Remove the nuts from the two mounting bolts and the two snap rings on the mounting pins behind the bracket.
3. Pull the mounting pins out of the caliper bracket and remove the air line from the caliper. The caliper should now be able to be removed.
4. Disassemble the brake caliper and remove the cap screws securing the brake pads.
5. Remove the brake rotor and have it professionally resurfaced at an automotive machine shop if it has gouges in it. If visible cracks are present in the brake rotor, replace it with a new one. Remove oil and dirt from the rotor with automotive brake cleaner. Once clean, only handle the rotor with a dry rag and install exactly the reverse of removal.
6. Install new brake pads, mount the caliper and reconnect the air line.
7. Test the safety shutdown operation by running the sander and pressing the emergency stop controls.



Oscillation Timing

NOTICE

The oscillation adjustments have been performed at the factory and should require no further attention. However, we recommend verifying the settings.

When the oscillation is correctly adjusted, the sanding belt oscillates to the left and to the right at the same speed. If the sanding belt makes contact with a limit switch, as shown in **Figure 25**, the emergency braking system will activate and stop the sander immediately.

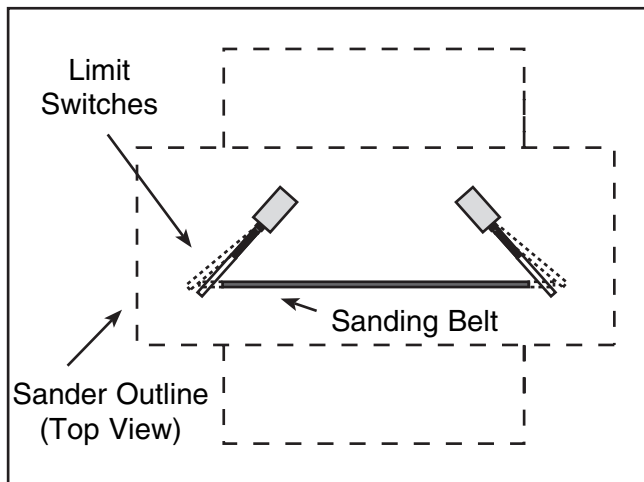


Figure 25. Improper oscillation.

To check the sanding belt oscillation:

1. Be sure the sanding belt is properly installed and the belt tension knob and air supply are **ON**.
2. Turn **ON** the sanding belt.
 - If the belt oscillates without contacting the limit switches, but the oscillation time to the left and right are **NOT** equal, proceed to **Step 5**, on **Page 33**.
 - If the belt tracks away from the air fork and air jet, colliding into the limit switch, continue with **Step 3**.

3. An adequate stream of air through the air fork gap (**Figure 26**) is essential for proper oscillation. If the jet of air is weak through the gap, the belt will track away from the controller and into the limit switch on the opposite end of the roller. The pivot action of the upper roller, and the resulting oscillation of the belt, are dependent upon adequate airflow through the air fork gap.

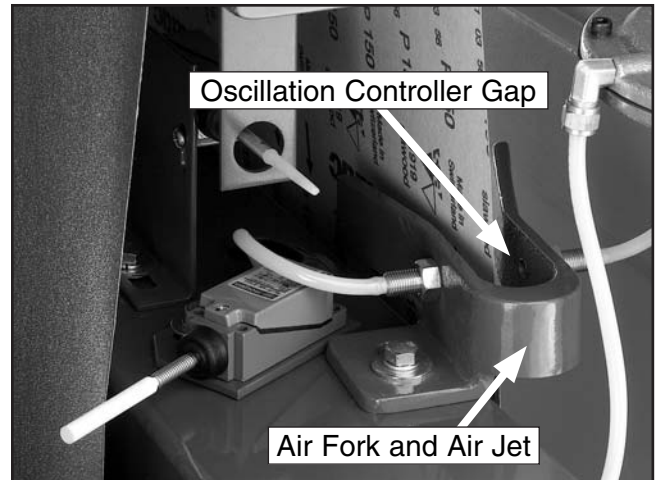


Figure 26. Oscillation components.

To set the correct amount of airflow through the air fork gap:

1. Remove the sanding belt and turn the belt tension knob to the tensioned position.
2. Loosen the lock nut on the airflow adjustment knob (**Figure 27**).
3. Turn the airflow adjustment knob (**Figure 27**) clockwise until the airflow is completely **OFF**. The upper roller should pivot to the right.
4. Slowly turn the airflow adjustment knob counterclockwise, and continue turning up the air pressure until the roller pivots to the left.

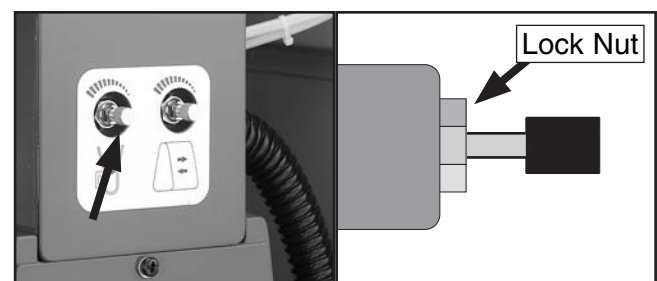


Figure 27. Airflow adjustment knob.



5. Tighten the lock nut (**Figure 27**) to secure the airflow adjustment knob.
6. Restrict the airflow across the air fork gap with a scrap piece of wood. You should notice the roller pivot to the right. When the stick is removed, the roller should pivot back to the left.
7. Test the oscillation by running the sander. Make note of the time it takes for the belt to oscillate from left-to-right and from right-to-left.

When correctly timed, the oscillation should take a similar amount of time to oscillate.

—If the oscillation time to the **right** is 2 seconds, but the oscillation time to the **left** is longer, loosen the oscillation adjustment knob (**Figure 28**) and move it to the **left** until proper tracking is achieved. Tighten down the oscillation adjustment knob when satisfied.

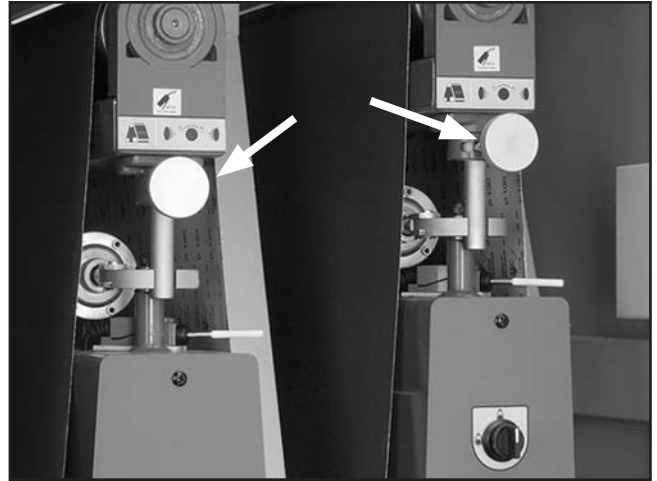


Figure 28. Oscillation adjustment knobs.

—If the oscillation time to the **left** is 2 seconds, but the oscillation time to the **right** is longer, loosen the oscillation adjustment knob and move it to the **right** until proper tracking is achieved. Tighten the oscillation adjustment knob when satisfied.

8. Continue to the next page to adjust the oscillation speed.



Oscillation Speed

The oscillation speed of the sanding belt is adjustable. Different oscillating speeds yield different sanding results. We recommend trying various speeds on a scrap piece of wood similar to the final workpiece.

To adjust the oscillation speed:

1. Loosen the lock nut on the speed control adjustment knob (**Figure 29**).

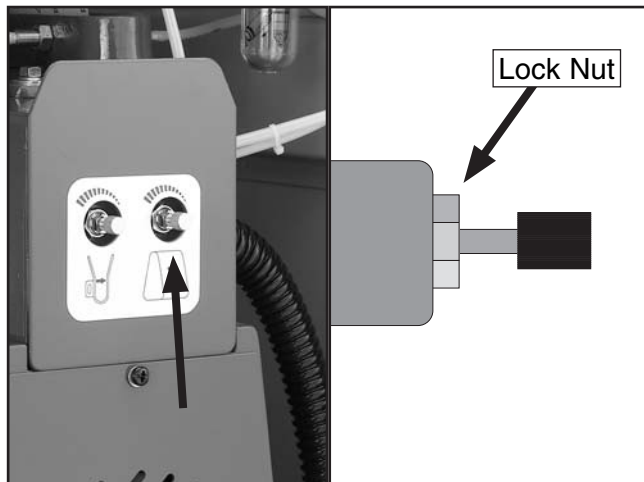


Figure 29. Speed control adjustment knob.

2. Turn the knob clockwise to decrease the oscillation speed and counterclockwise to increase it.
3. Tighten the lock nut loosened in **Step 1** to secure the knob.

Table Parallelism

NOTICE

The table has been adjusted at the factory and should require no further attention. However, we recommend verifying that it is parallel with the sanding roller.

The corners of the table can be independently adjusted up or down. By disconnecting the chain and turning the pertinent table elevation screw sprocket, (**Figure 30**) table parallelism can be achieved.

Adjusting the table parallelism can be a very tedious task that takes a great amount of patience. DO NOT adjust the table unless you are having trouble sanding your workpiece to a uniform thickness.

If a table adjustment is needed, take precise notes on the positioning of the table elevation screws. This will allow the original setting to be re-established.

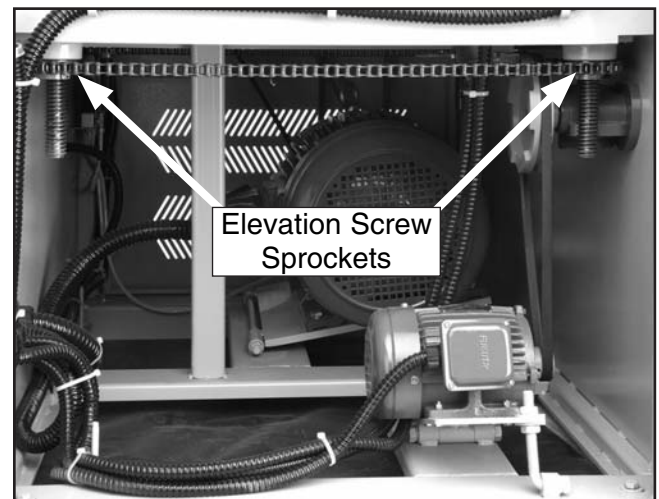


Figure 30. View of elevation screw sprockets.



To adjust the table parallelism:

1. Pass a 37" wide board through the sander until the **entire** surface of the board is making contact with the sanding belt.
2. Measure the thickness of the board at various points around the edge.
3. If there is a variation of thickness, the table can be adjusted accordingly.
4. **DISCONNECT THE SANDER FROM THE POWER SOURCE!**

—For minor adjustment, loosen the table mounting bolts shown in **Figure 31** and rotate the elevation screw flange.

—For major adjustment, mark the chain location on all sprockets, remove the chain from the sprocket to be adjusted, and turn the sprocket counterclockwise to raise the table. One quarter of a turn raises or lowers an elevation screw approximately 0.020"

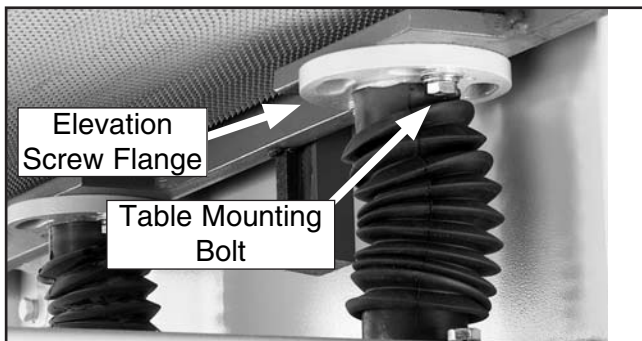


Figure 31. Table mounting bolts.

NOTICE

When adjusting the left front elevation screw, make the same adjustment to the left rear elevation screw. This ensures the height from the front to the back of the table remains unchanged. Do the same when adjusting the right elevation screws.

5. Reinstall the chain, tighten the bolts, and test the machine.

Pressure Rollers

To adjust the pressure rollers:

1. **DISCONNECT THE SANDER FROM THE POWER SOURCE!**
2. Plane a 6' long 2x4 to a uniform thickness and cut it in half. Place one board along the length of the feed belt on the right-hand side and place the other board on the left-hand side.
3. With the sanding belt tensioned (**Figure 32**), move the sanding rollers by hand and manually raise the table until you hear the sandpaper just contact the surface of the wood. **DO NOT** continue to raise the table beyond that point.

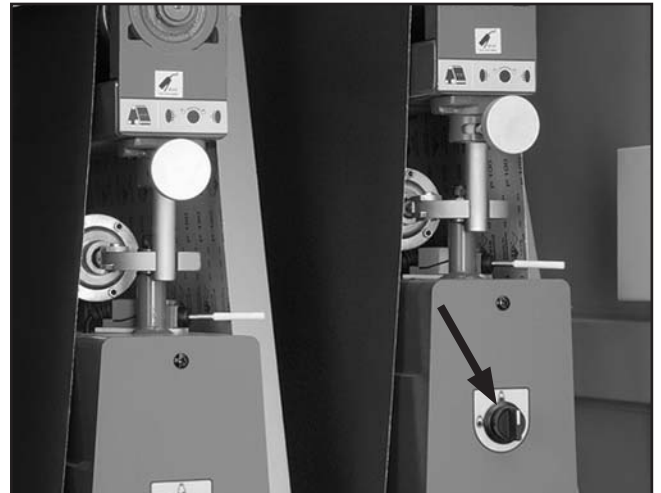


Figure 32. Belt tension knob.

4. Connect the sander to the power source and make note of the reading on the digital display. Then manually lower the table 0.020" to 0.030". This is how much lower the infeed pressure roller should be set when compared to the sanding surface of the sanding roller.
5. **DISCONNECT THE SANDER FROM THE POWER SOURCE!**



- Loosen the roller lock nuts (**Figure 33**) on the infeed pressure roller. Turn the adjustment studs (**Figure 33**) to lower the pressure roller until it just touches the board.

Note: DO NOT continue to lower the roller beyond that point.

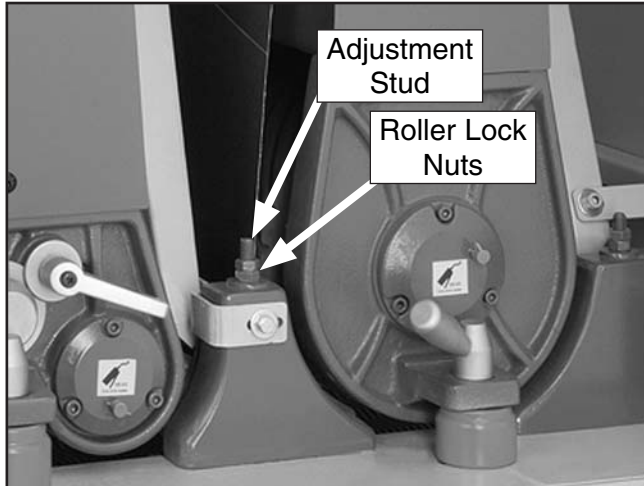


Figure 33. Pressure roller adjustment location.

- Tighten the roller lock nuts and recheck your settings.
- Connect the sander to the power source and make note of the reading on the digital display. Then manually lower the table an additional 0.020" to 0.030". This is how much lower the outfeed pressure roller should be set when compared to the height of the infeed roller.
- Loosen the roller lock nuts on the outfeed pressure roller. Turn the adjustment bolts to lower the pressure roller until it just touches the board.

Note: DO NOT continue to lower the roller beyond that point.

- Tighten the roller lock nuts and recheck your settings.

Note: Variables such as feed rate, depth of the cut, and the type of sanding belt can play a big part in determining the proper amount of downward pressure exerted by the rollers. Some experimentation may be necessary to achieve the desired results. However, under no circumstances should the pressure rollers be set even, or higher than, the sanding roller.



V-Belt Adjustment

To adjust either V-belt:

- DISCONNECT THE SANDER FROM THE POWER SOURCE!
- Loosen the lock nut (**Figures 34 & 35**).

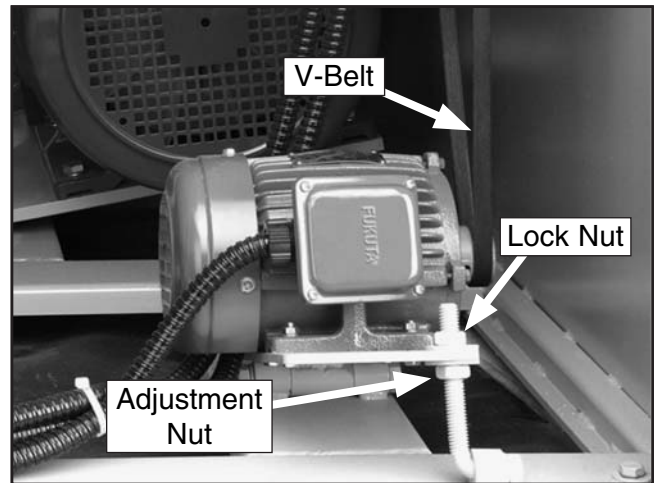


Figure 34. Table elevation V-belt.

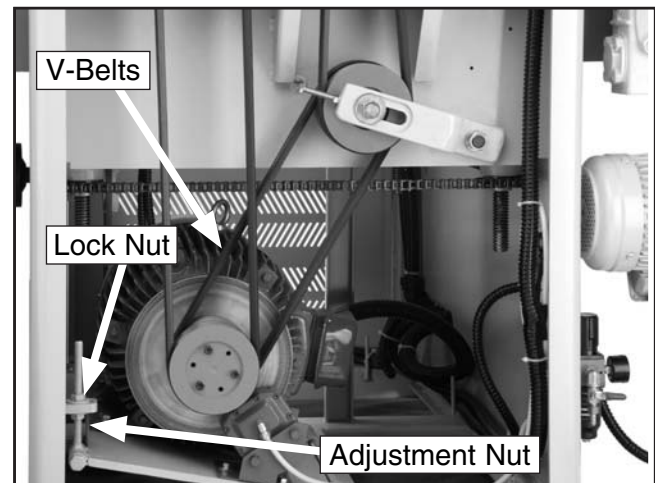


Figure 35. Sanding drum V-belts.

- Turn the adjustment nut up or down until the V-belts deflect 1" off of center when pushed with your finger.
- Retighten the lock nut.

Conveyor Belt Replacement

Tools Needed: Qty

Make sure that you have a lifting device or another person to help in table removal.

| | |
|-------------------------------|---|
| 9 mm Hex Wrench..... | 1 |
| 19 mm Combination Wrench..... | 1 |
| 12 mm Combination Wrench..... | 1 |
| 14 mm Combination Wrench..... | 1 |
| #2 Phillips Screwdriver | 1 |
| 8' 2x4s | 2 |
| Permanent Marker | 1 |

To remove the conveyor belt use **Figure 37** and follow the steps below:

1. Raise the table up so the conveyor belt is approximately two-inches away from the sanding roller or platen, and then **DISCONNECT THE SANDER FROM THE POWER SOURCE!**
2. Remove the gearbox mounting bracket, and with an assistant's help, slide the motor and gearbox from the roller shaft and lower it to the floor.

Note: Do not loosen the two vibration dampener washers shown in **Figure 37**.
3. Remove two table height limit switches.
4. Remove both lower access panels.
5. Remove the left and right table guides.
6. Using a permanent marker, mark all four lead screw flange positions (**Figure 36**), and remove all hex bolts from the flanges.

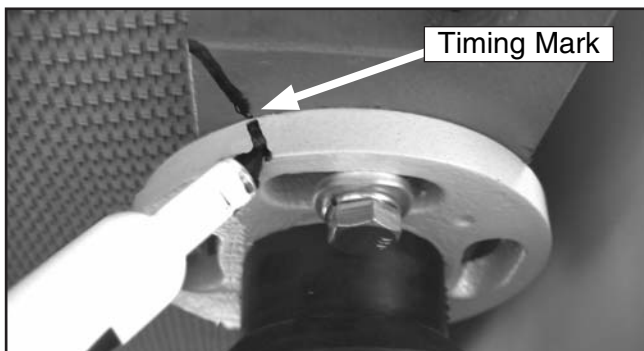


Figure 36. Marking lead screw for reassembly.

7. Insert two 2x4 x 8' wooden studs under the table to support the table, and then both people must lift the table slightly and move it out of the rear of the machine.
8. Disconnect the limit switch, remove all mounting screws, and remove the emergency stop push-panel assembly.
9. Turn both tracking adjustment bolts counter-clockwise five turns, remove one roller support, and slide the drum out of the table assembly.
10. Remove the old conveyor belt, inspect rollers, bearings, table for wear and replace as required.
11. Install the new conveyor belt. **Note:** The belt is non-directional.
12. Install the front roller, the roller support, and turn both tracking adjustment bolts clockwise equally so the conveyor belt becomes taut and does not hang loose. **DO NOT OVERTIGHTEN** the belt.
13. With a helper, install the table from the rear in a similar fashion as it was removed.
14. Install the table guides and the left and right lower access panels.
15. Align the lead screw flanges with the marks made in **Step 6**, and install the hex bolts.
16. Install the table height limit switches so the upper switch clicks when the conveyor surface is 1/4" away from the sandpaper, and the lower switch clicks when the conveyor table is 1/4" higher than its lowest position. Make sure that you test your settings with the hand wheel manually so you don't crash the table if incorrectly set the first time around.
17. With a helper, install the gearbox, vibration dampener washers, and mounting bracket.
18. Install the emergency stop pushpanel assembly and the limit switch.
19. Start the conveyor motor and turn the conveyor tracking bolts as required until the conveyor belt tracks straight without loading up on one side of the table.



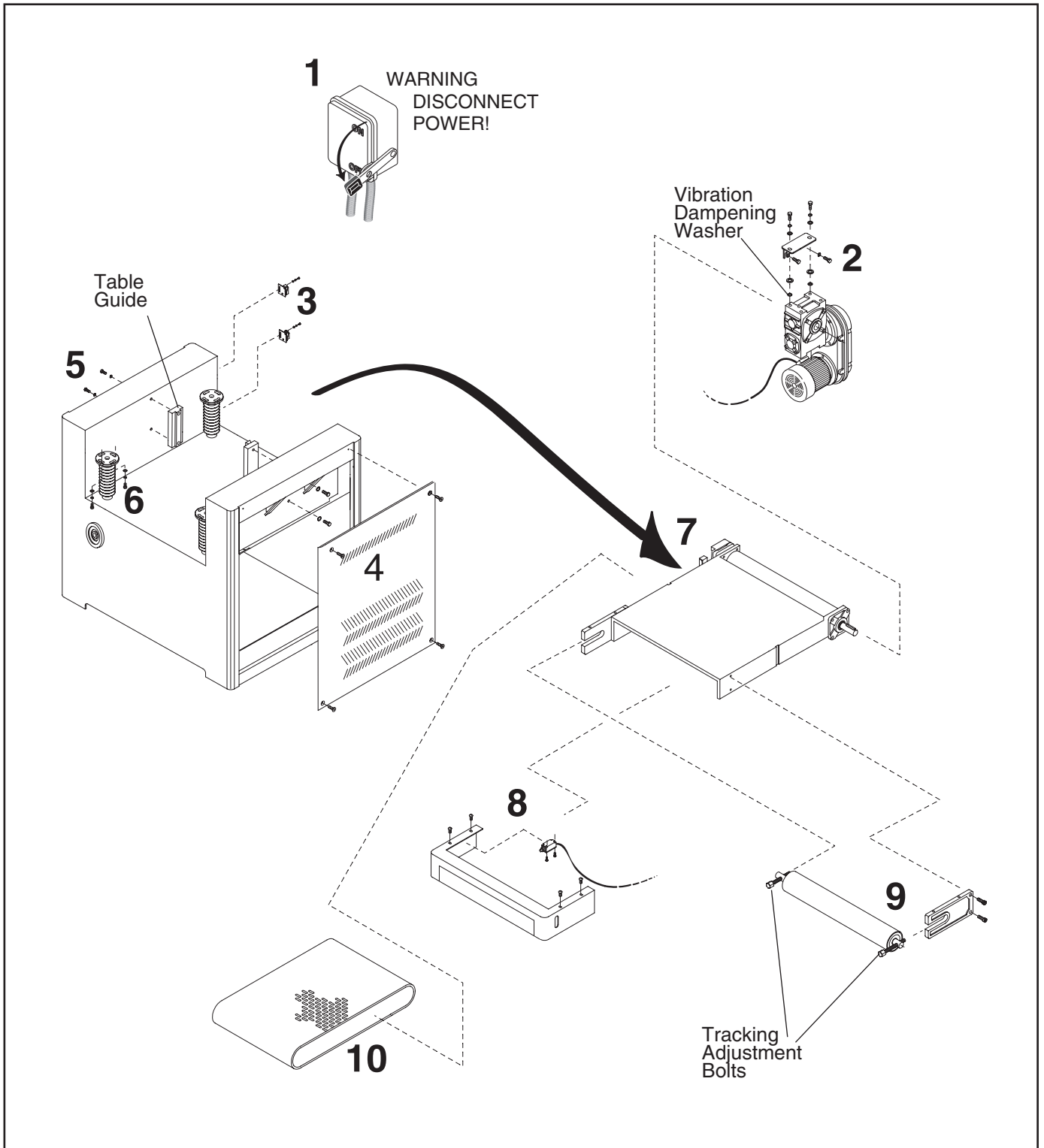


Figure 37. Conveyor belt removal sequence.



Feed Belt Tension

| Tools Needed: | Qty |
|------------------------------|-----|
| 20mm Wrench or Socket..... | 1 |
| #2 Phillips Screwdriver..... | 1 |

To adjust the feed belt tension:

1. DISCONNECT THE SANDER FROM THE POWER SOURCE!
2. Find the adjustment ports in the safety guard (**Figure 38**) at the front end of the feed table.
3. Turn both left and right adjustment bolts (**Figure 38**) clockwise equally to increase tension.

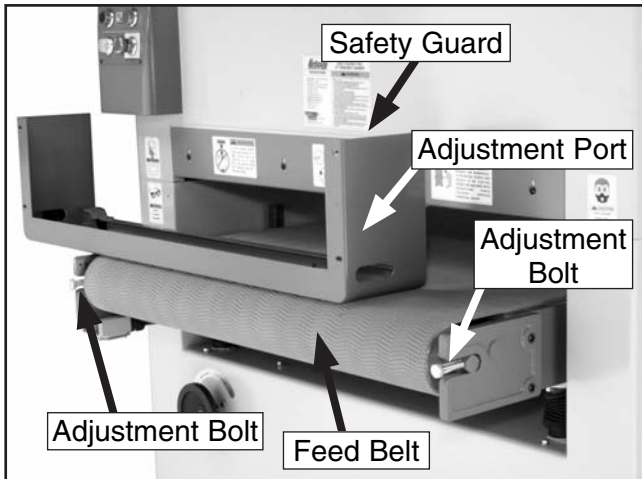


Figure 38. Feed belt tension adjustment bolts.
Note: Safety guard removed for clarity.

4. When tensioned properly you should not be able to lift the feed belt off of the table surface or slide it back and forth.

!WARNING

DO NOT sand boards with the guard removed. Failure to follow this warning could result in serious personal injury.

Feed Belt Tracking

| Tools Needed: | Qty |
|---------------------|-----|
| 6mm Hex Wrench..... | 1 |

NOTICE

Adjust the feed belt tension before adjusting the feed belt tracking.

To adjust the feed belt tracking:

1. Turn the feed belt **ON**.
2. If the feed belt is tracking to the **right** side of the table, turn the **right** adjustment bolt (**Figure 38**) clockwise.
3. If the feed belt is tracking to the **left** side of the table, turn the **left** adjustment bolt clockwise.

Note: The edge of the feed belt should just touch the guide wheels as shown in **Figure 39**.

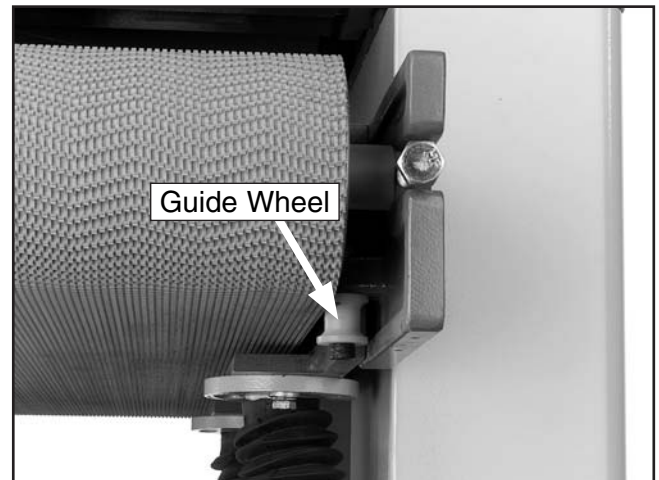


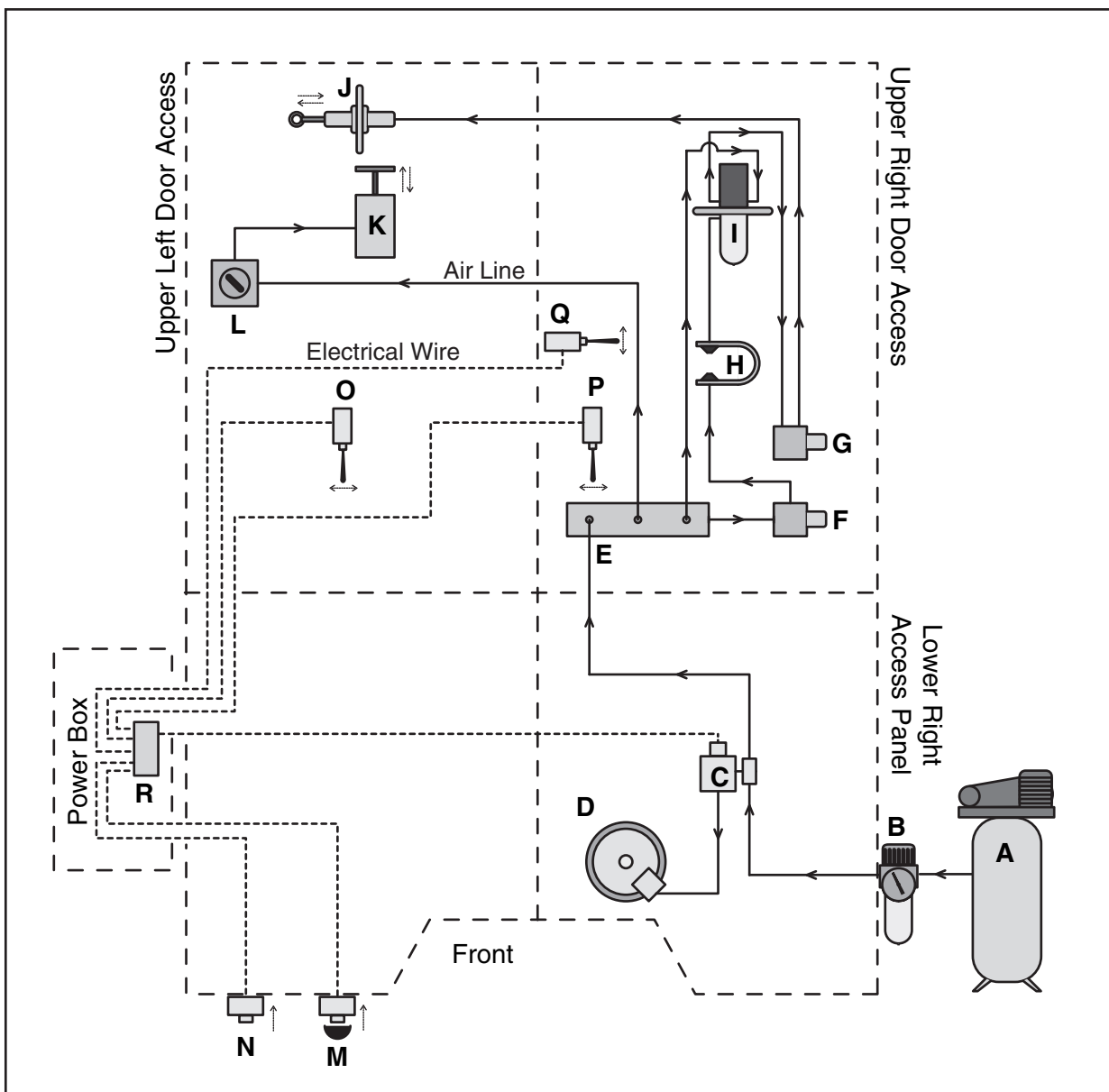
Figure 39. Guide wheels.

4. Run the feed belt for 3-5 minutes and recheck the tracking.
5. If the belt is still tracking correctly, replace the safety guard removed in the previous subsection.



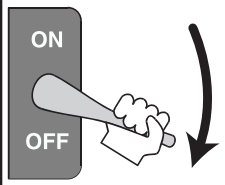
Air System Diagram

- A. Shop Compressor
- B. Air Pressure Regulator
- C. Emergency Brake Solenoid
- D. Emergency Brake
- E. Air Distribution Manifold
- F. Airflow Adjustment Knob (Oscillation Timing)
- G. Speed Control Adjustment Knob (Oscillation Speed)
- H. Oscillation Controller Air Fork
- I. Oscillation Timing Piston and Diaphragm Assy.
- J. Oscillation Speed Control Piston
- K. Belt Tension Control Piston
- L. Belt Tension Control Switch
- M. Emergency Stop Button Switch
- N. Emergency Stop Push Brake Switch
- O. Left Belt Limit Switch
- P. Right Belt Limit Switch
- Q. Belt Tension Limit Switch
- R. Emergency Brake Contactor



Troubleshooting

| SYMPTOM | POSSIBLE CAUSE | CORRECTIVE ACTION |
|---|---|---|
| Motor will not start. | <ol style="list-style-type: none"> 1. Limit switch or emergency stop is at fault. 2. Low voltage. 3. Open circuit in motor or loose connections. | <ol style="list-style-type: none"> 1. Correct situation that caused limit switch to engage, reset the emergency stop button. 2. Check power line for proper voltage. 3. Inspect all lead connections on motor for loose or open connections. |
| Motor will not start; fuses or circuit breakers blow. | <ol style="list-style-type: none"> 1. Short circuit in line cord or plug. 2. Short circuit in motor or loose connections. 3. Incorrect fuses or circuit breakers in power line. | <ol style="list-style-type: none"> 1. Inspect cord or plug for damaged insulation and shorted wires. 2. Inspect all connections on motor for loose or shorted terminals or worn insulation. 3. Install correct fuses or circuit breakers. |
| Motor overheats. | <ol style="list-style-type: none"> 1. Motor overloaded. 2. Air circulation through the motor restricted. | <ol style="list-style-type: none"> 1. Reduce load on motor. 2. Clean out motor to provide normal air circulation. |
| Motor stalls (resulting in blown fuses or tripped circuit). | <ol style="list-style-type: none"> 1. Short circuit in motor or loose connections. 2. Low voltage. 3. Incorrect fuses or circuit breakers in power line. 4. Motor overloaded. | <ol style="list-style-type: none"> 1. Inspect connections on motor for loose or shorted terminals or worn insulation. 2. Correct the low voltage conditions. 3. Install correct fuses or circuit breakers. 4. Reduce load on motor. |
| Machine slows when operating. | <ol style="list-style-type: none"> 1. Feed rate too high. 2. Depth of cut too great. | <ol style="list-style-type: none"> 1. Feed workpiece slower. 2. Reduce depth of cut. |
| Loud, repetitious noise coming from machine. | <ol style="list-style-type: none"> 1. Pulley set screws or keys are missing or loose. 2. Motor fan is hitting the cover. 3. V-belt is defective. | <ol style="list-style-type: none"> 1. Inspect keys and set screws. Replace or tighten if necessary. 2. Tighten fan or shim cover. 3. Replace V-belt. Refer to the Maintenance section. |
| Machine is loud, overheats or bogs down in the cut. | <ol style="list-style-type: none"> 1. Excessive depth of cut. 2. Dull or dirty sanding belt. | <ol style="list-style-type: none"> 1. Decrease depth of cut. 2. Replace or clean sanding belt. |
| Rounded workpiece edges. | <ol style="list-style-type: none"> 1. Excessive depth of cut. | <ol style="list-style-type: none"> 1. Reduce depth of cut. |
| Uneven thickness from left to right of board. | <ol style="list-style-type: none"> 1. Feed table not parallel to sanding roller. 2. Conveyor belt is worn. | <ol style="list-style-type: none"> 1. Adjust the table. 2. Replace conveyor belt. |
| Workpiece slips on feed belt. | <ol style="list-style-type: none"> 1. Pressure rollers set too high. 2. Dirty conveyor belt. 3. Conveyor belt is worn. | <ol style="list-style-type: none"> 1. Lower pressure rollers. 2. Clean conveyor belt. 3. Replace conveyor belt. |
| Straight strip of notches on workpiece. | <ol style="list-style-type: none"> 1. Pressure rollers are dirty or damaged. | <ol style="list-style-type: none"> 1. Clean or repair pressure rollers. |
| Snake shaped marks on workpiece. | <ol style="list-style-type: none"> 1. Sanding belt damaged or dirty. | <ol style="list-style-type: none"> 1. Clean or replace sanding belt. |



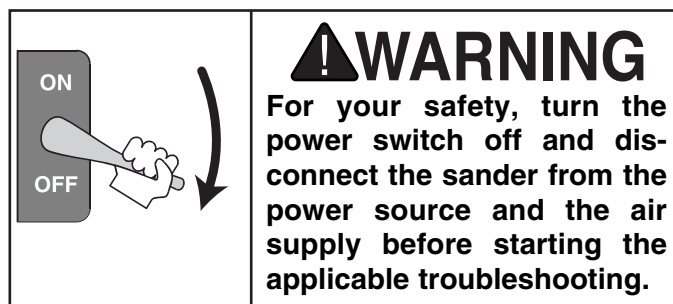
⚠ WARNING

For your safety, turn the power switch off and disconnect the sander from the power source and the air supply before starting the applicable troubleshooting.

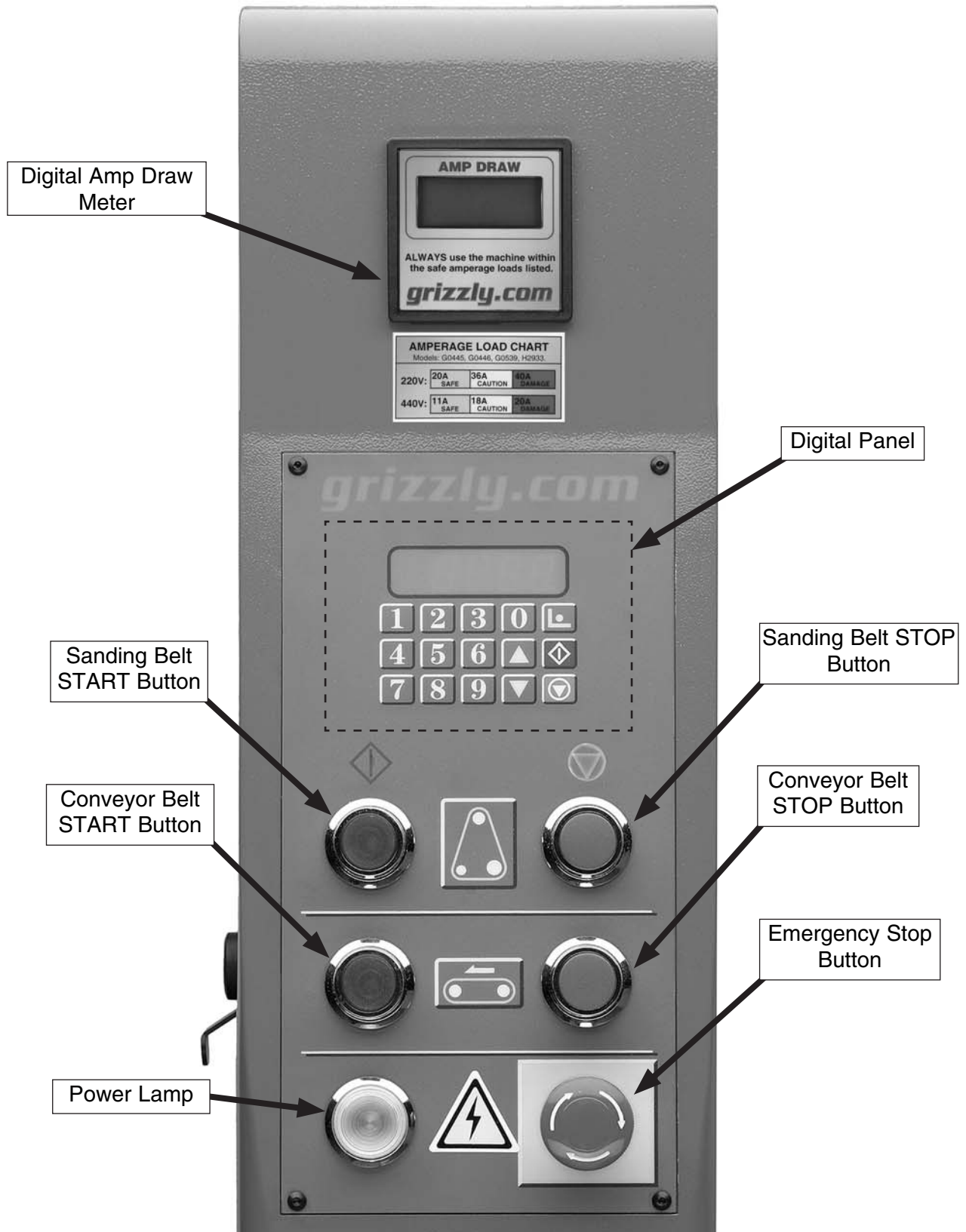


Troubleshooting

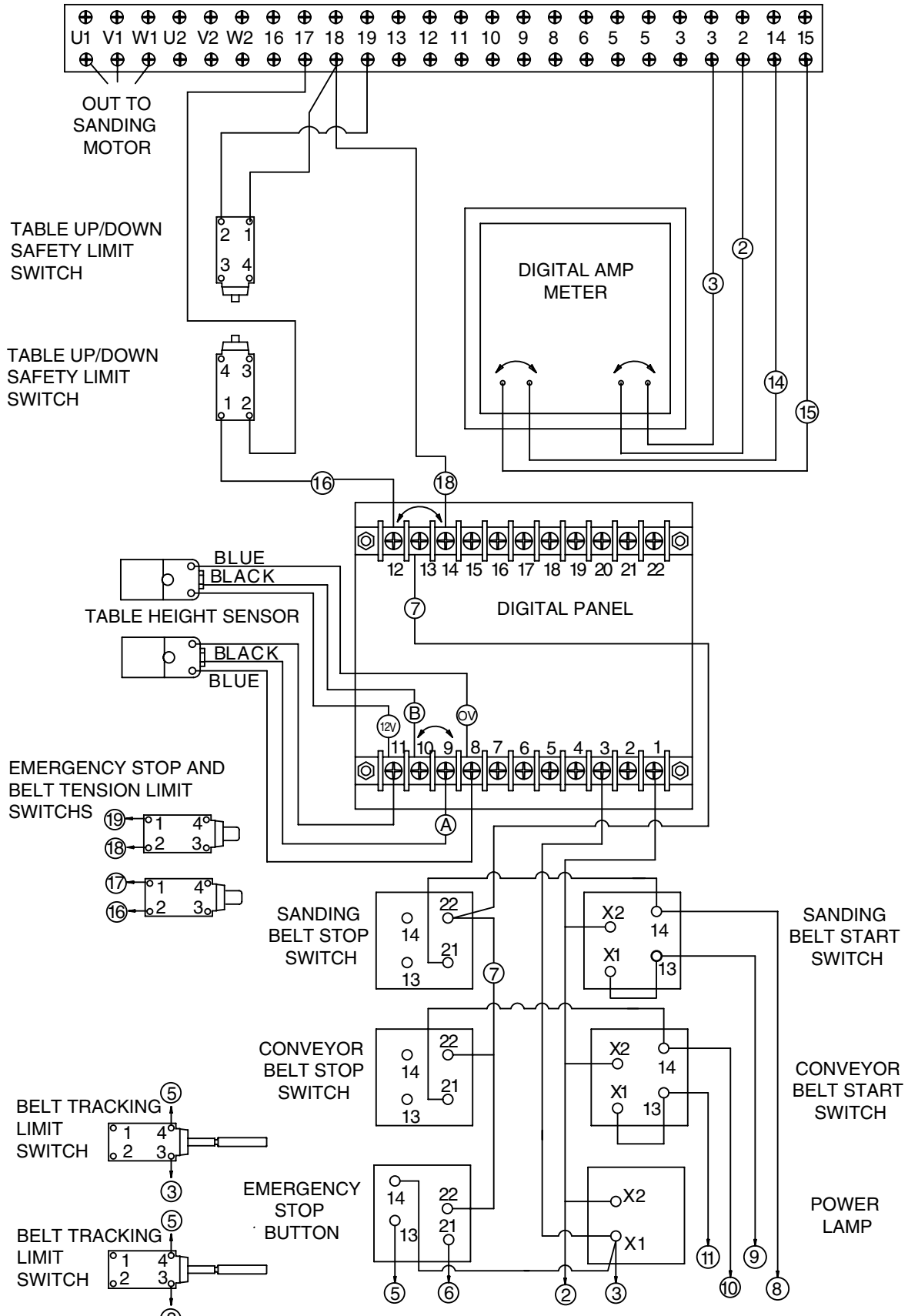
| SYMPTOM | POSSIBLE CAUSE | CORRECTIVE ACTION |
|---|--|--|
| Lines across width of workpiece. | 1. Sanding belt seam is open or damaged. | 1. Repair or replace sanding belt. |
| Glossy spots or streaks on workpiece. | 1. Worn sanding belt. 2. Rear pressure roller too low. | 1. Replace sanding belt. 2. Raise rear pressure roller. (See warning in Pressure Roller section!) |
| Sanding belt clogs quickly. | 1. Sanding belt grit too small for particular job. 2. Excessive depth of cut. 3. Wood is too moist. | 1. Replace with a coarser grit sanding belt. 2. Reduce depth of cut. 3. Allow wood to dry out. |
| Sanding belt does not tension correctly; rollers slip under belt. | 1. Low air pressure. 2. Air leaks in system. | 1. Adjust air pressure to 75 PSI at primary regulator. 2. Inspect all hoses and connections for leaking air; use water on suspected area to detect bubbles. |
| Sanding belt runs off to one side, stopping the sander. | 1. Air eye fork clogged. 2. Oscillation return valve closed. 3. Oscillation timing incorrect. | 1. Clean the intake hole on the air eye fork. 2. Open valve. 3. Adjust oscillation timing. |
| Sanding belt will not start. | 1. Sanding belt is not tensioned. 2. Limit switches engaged. 3. Emergency stop plate engaged. | 1. Tension sanding belt. 2. Center sanding belt so it is not touching the limit switches. 3. Make sure emergency stop switch is released. |
| Poor, non-aggressive sanding results. | 1. Worn sanding belt. 2. Sanding belt loaded with sawdust. | 1. Replace sanding belt with a new one. 2. Clean sanding belt to unload sawdust. |
| Conveyor belt not tracking in center. | 1. Conveyor rollers moved out of adjustment. | 1. Re-adjust conveyor rollers. |
| Conveyor belt slipping. | 1. Conveyor rollers have incorrect tension. 2. Conveyor rollers contaminated with dirt or dust. | 1. Adjust conveyor rollers to place more tension on the workpiece. 2. Clean conveyor rollers. |
| Emergency brake stops slow. | 1. Air pressure incorrect. 2. Air leak in system. 3. Brake rotor contaminated with oil. 4. Brake pads worn out. | 1. Adjust air pressure to 75 PSI. 2. Find and fix air leaks. 3. Clean brake rotor with automotive brake parts cleaner. 4. Replace brake pads. |
| Grinding noise when braking. | 1. Brakes severely worn out. | 1. Replace brake pads, have rotor turned (possibly replaced). |



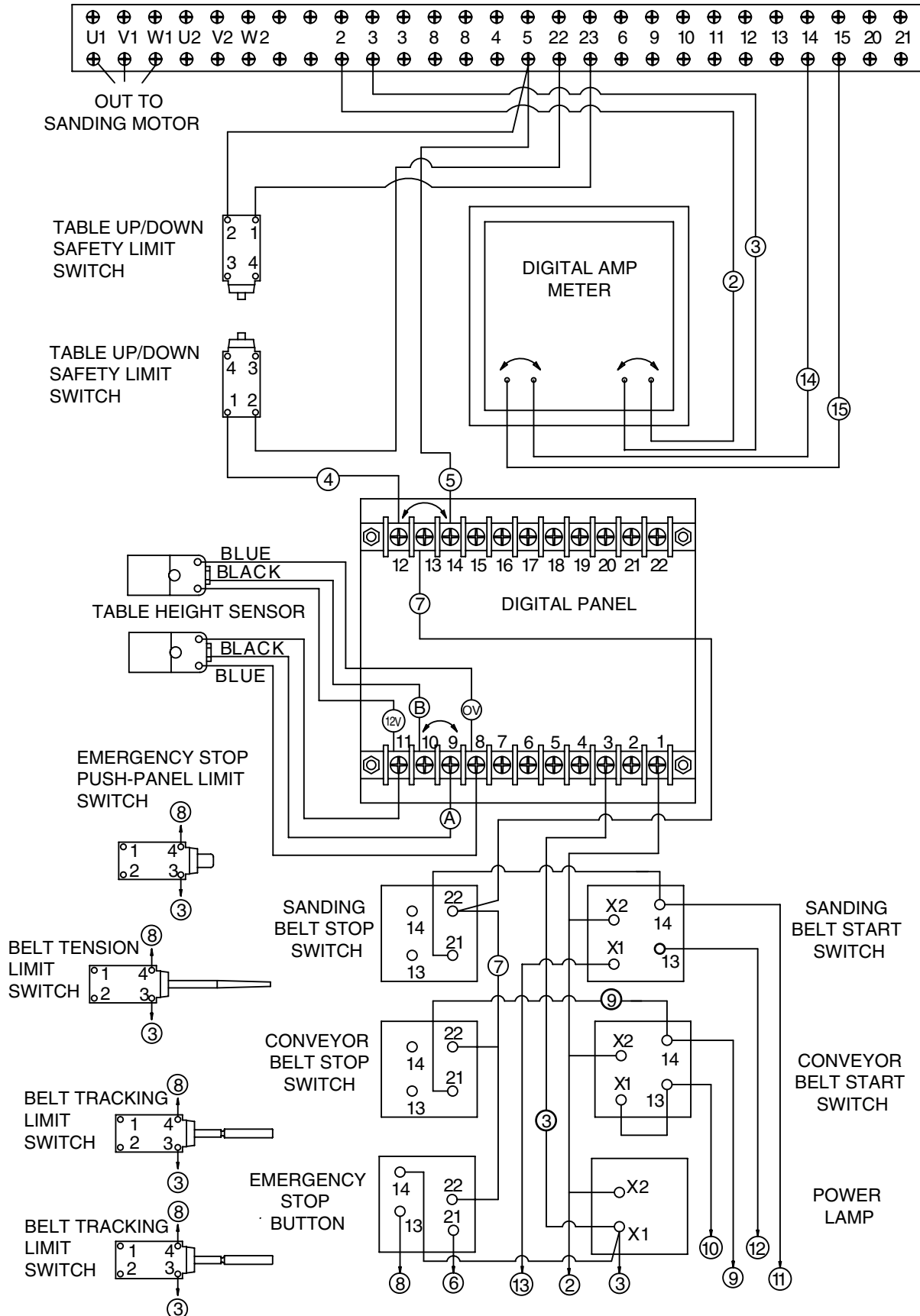
Control Panel Component Locations (H2933/H2934/G0447/G0581)



Control Panel Electrical Diagram (H2933/H2934/G0447)



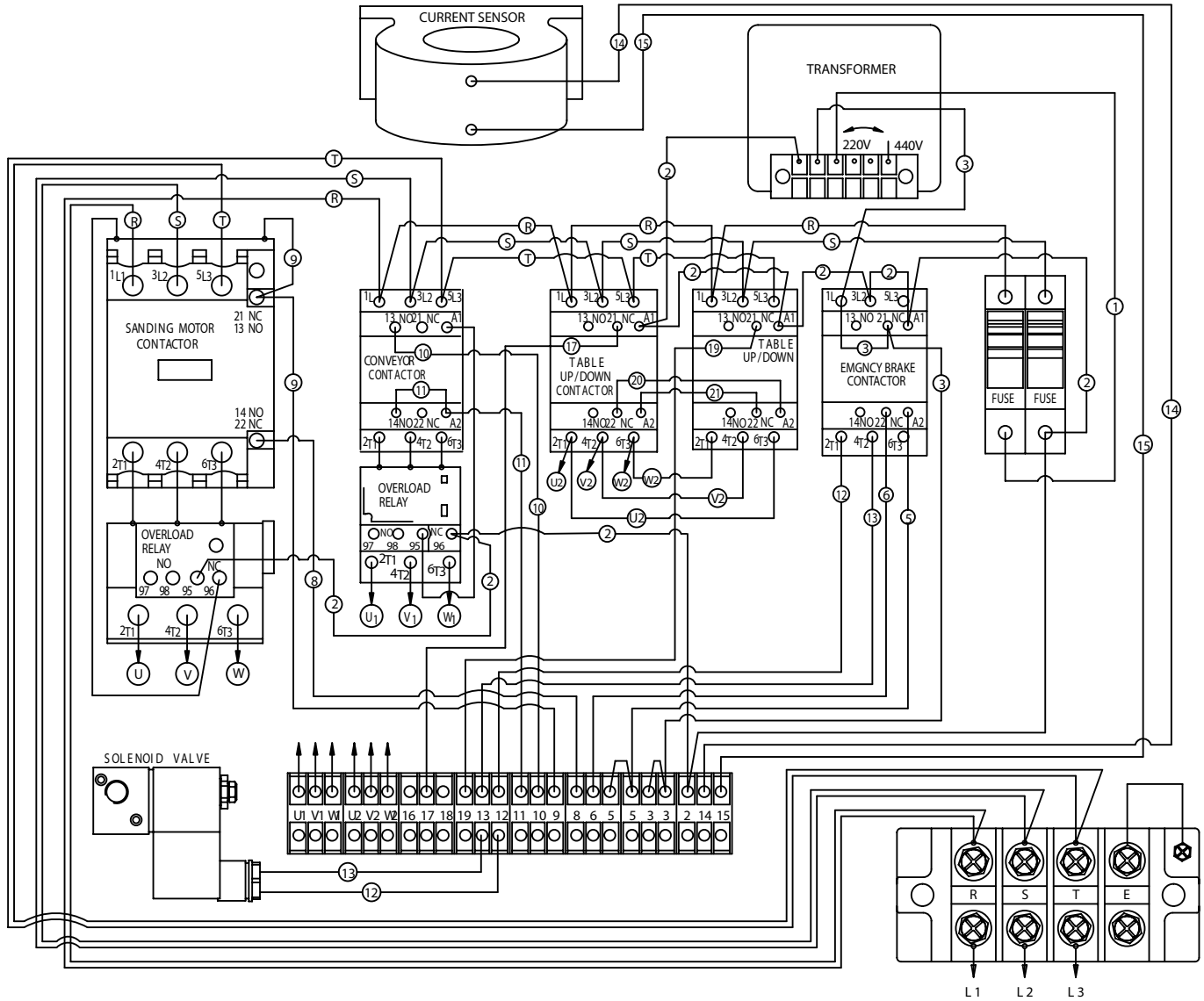
Control Panel Electrical Diagram (G0581)



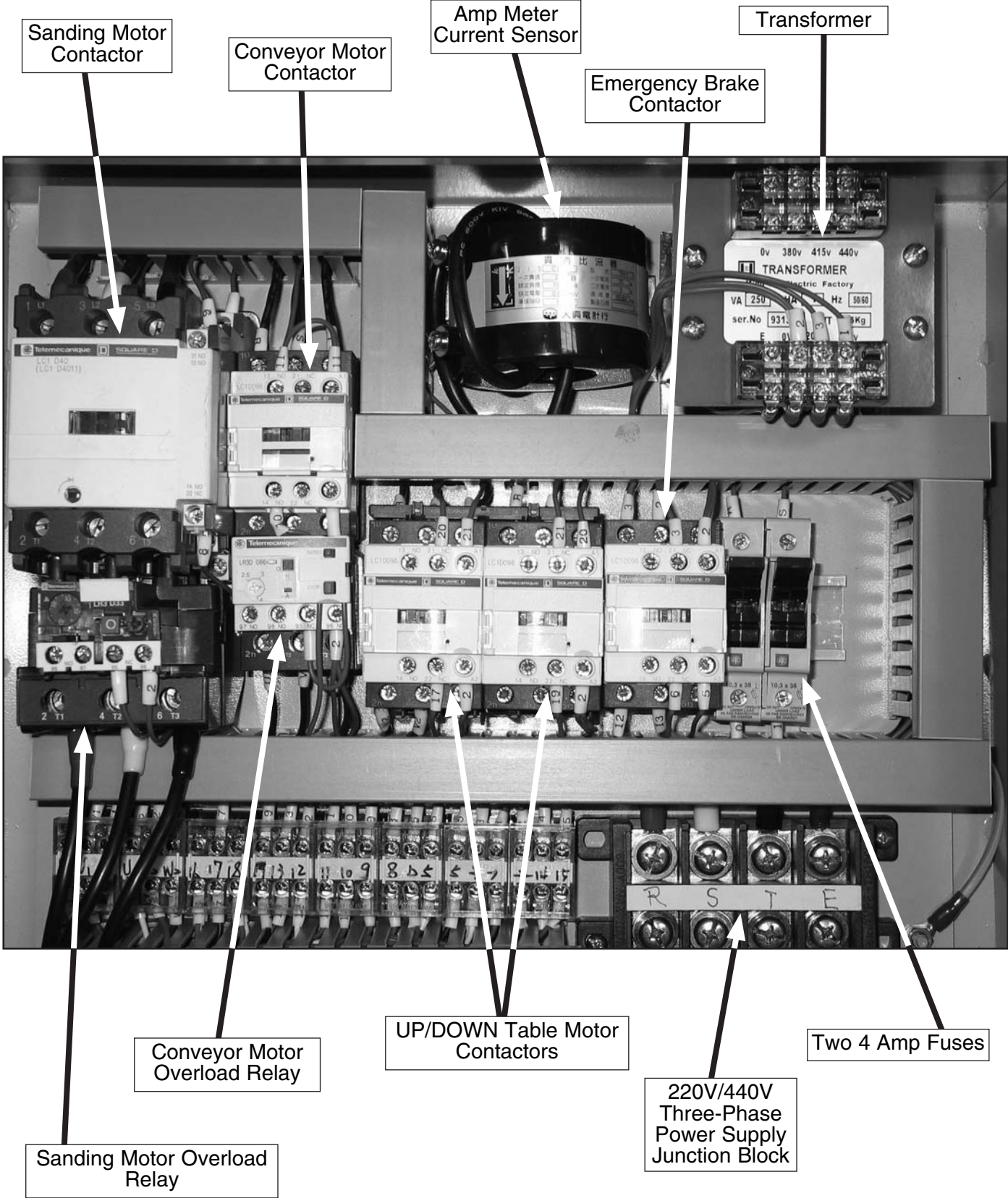
Notes



Wiring Box Electrical Diagram (H2933) 220V 3-PH



Wiring Box Components (H2933)



Sanding Motor Contactor

Conveyor Motor Contactor

Amp Meter Current Sensor

Transformer

Emergency Brake Contactor

Conveyor Motor Overload Relay

Sanding Motor Overload Relay

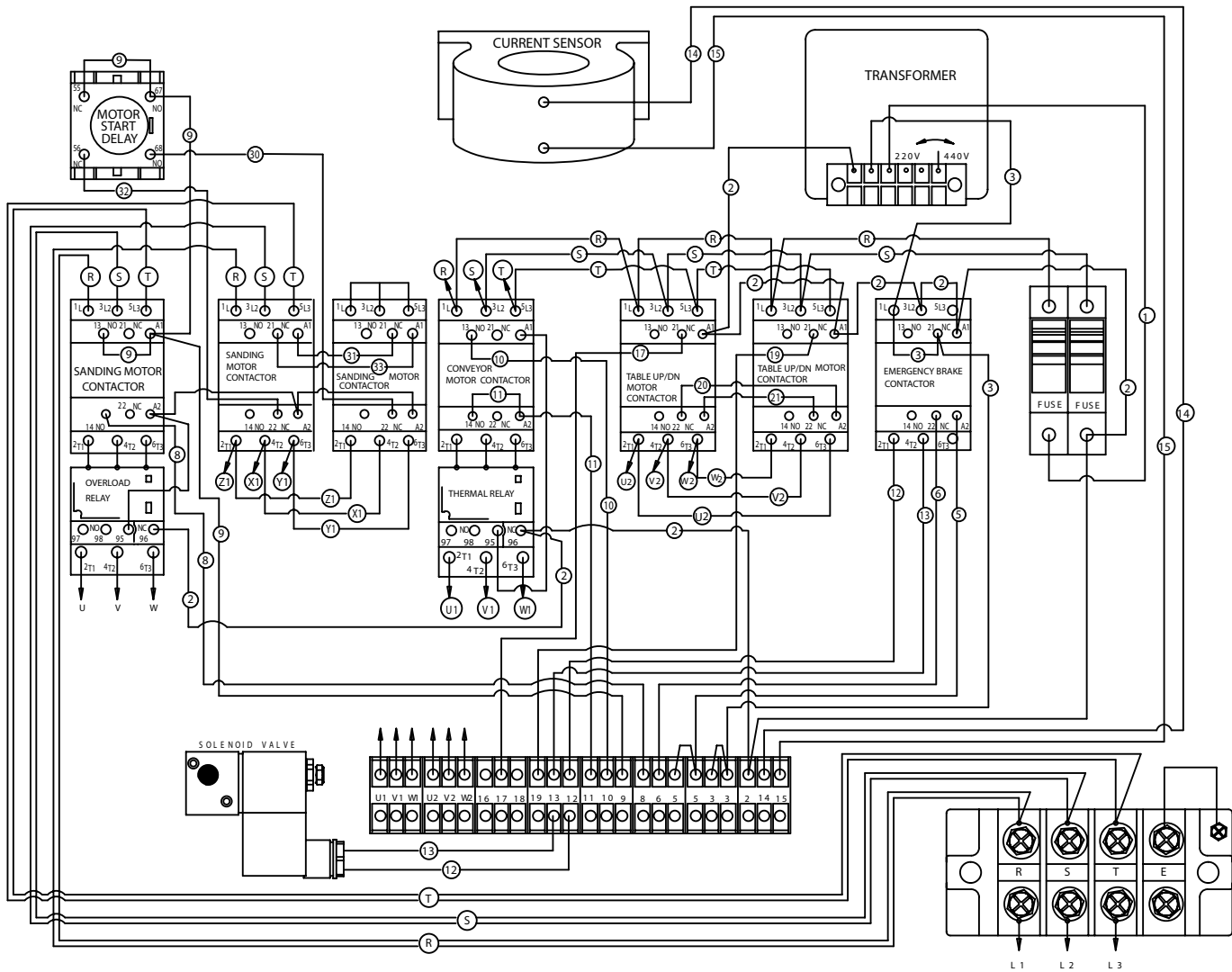
UP/DOWN Table Motor Contactors

220V/440V Three-Phase Power Supply Junction Block

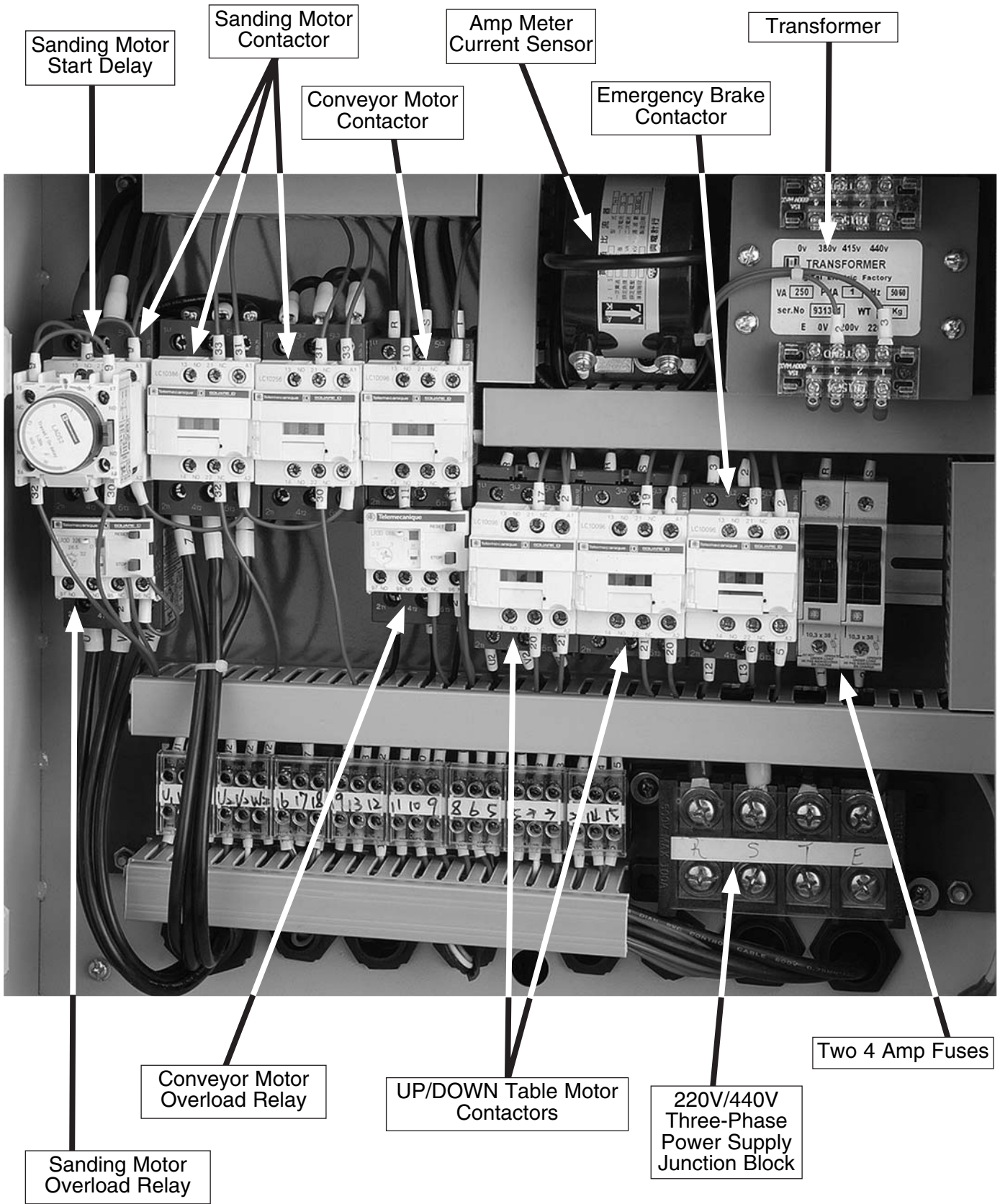
Two 4 Amp Fuses



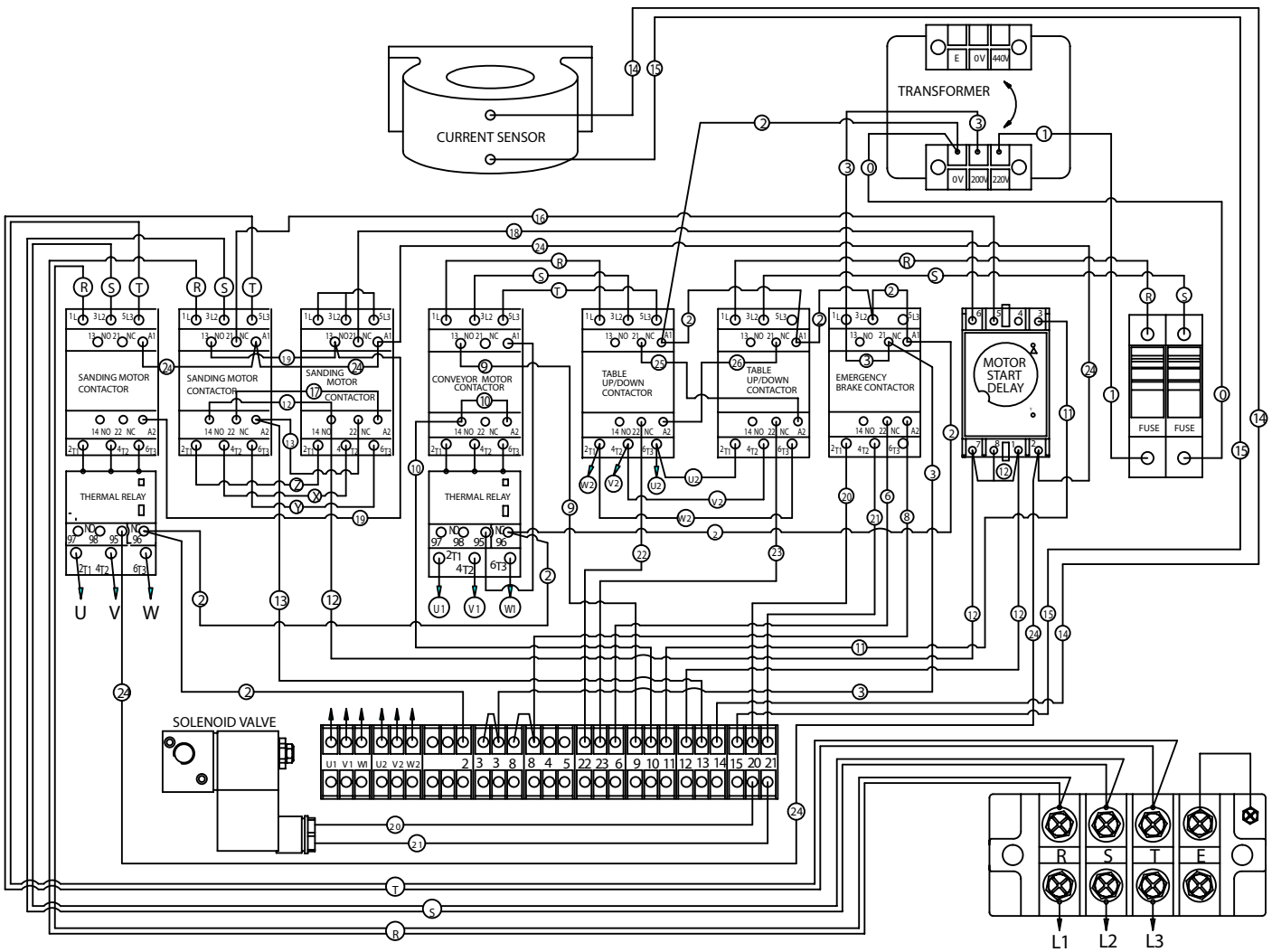
Wiring Box Electrical Diagram (H2934/G0447) 220V 3-PH



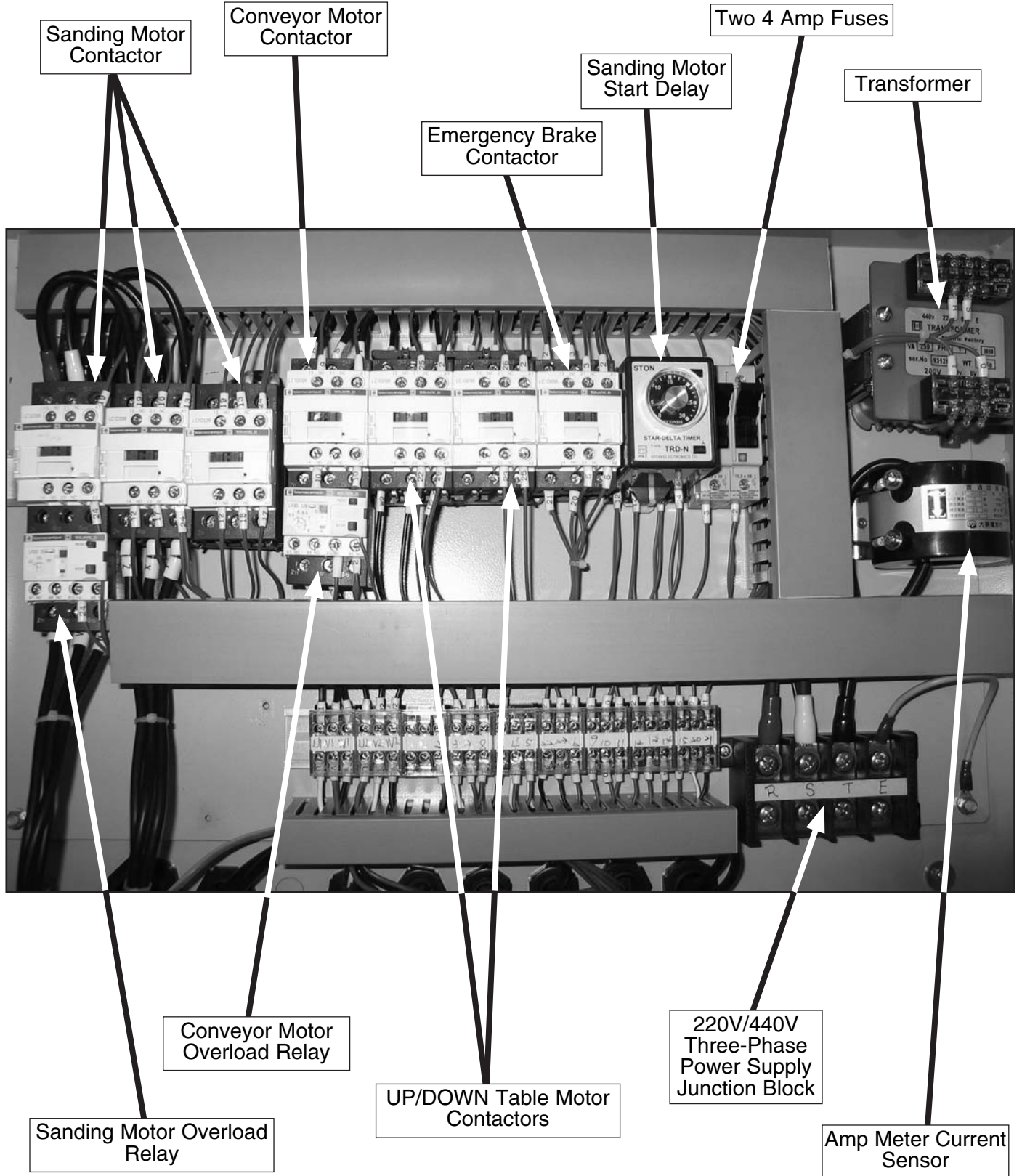
Wiring Box Components (H2934/G0447)



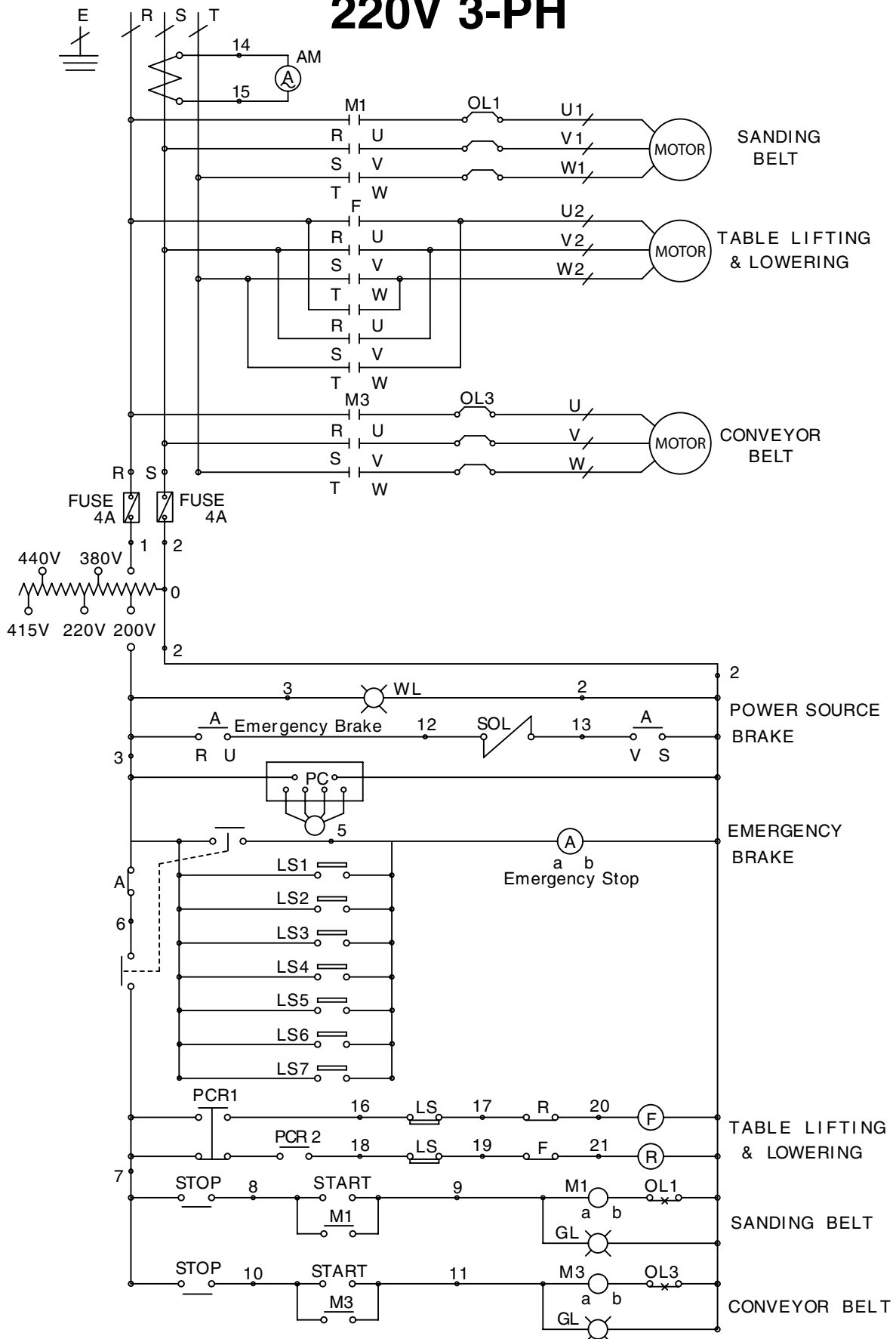
Wiring Box Electrical Diagram (G0581) 220V 3-PH



Wiring Box Components (G0581)

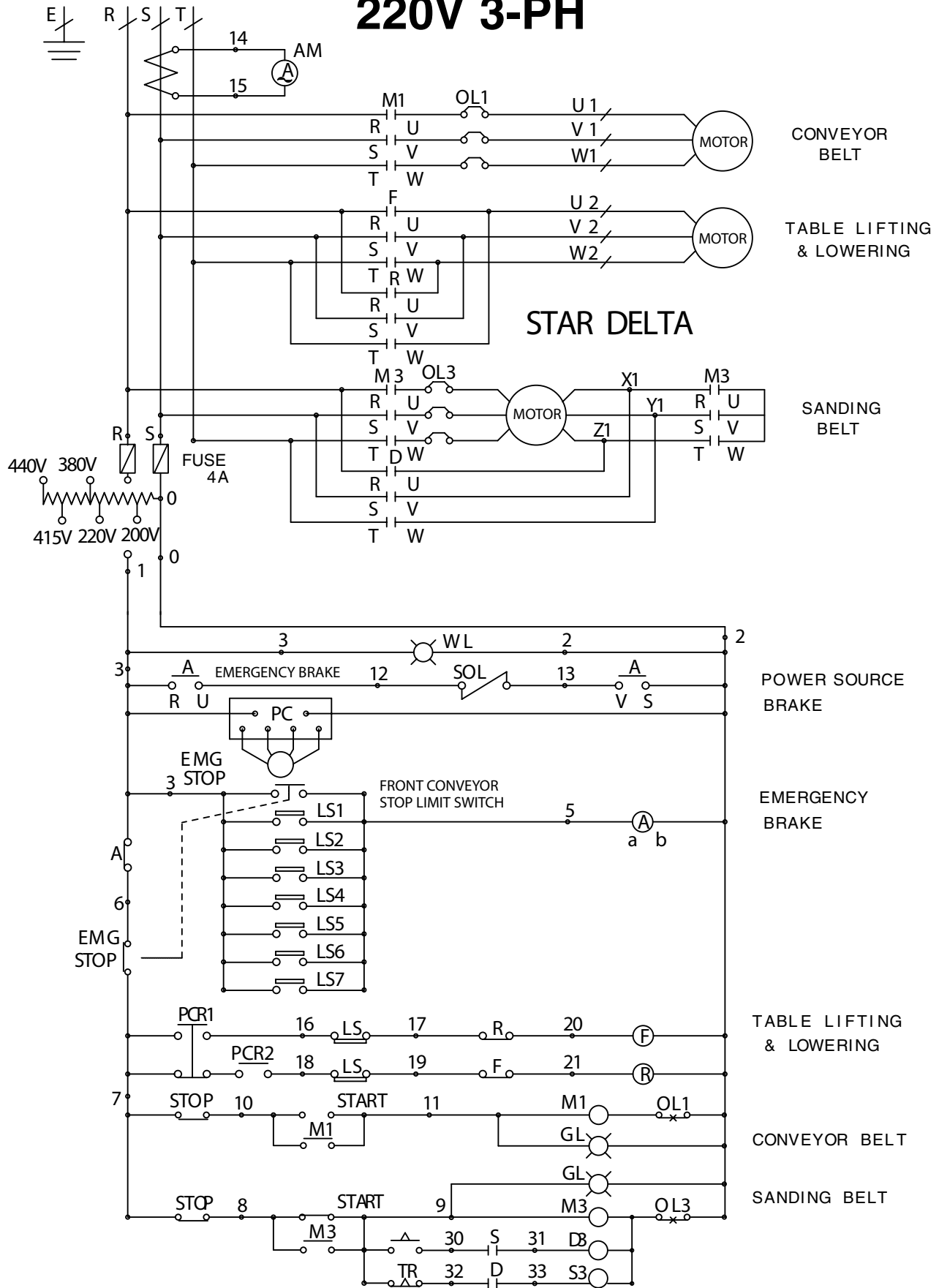


General Electrical Diagram (H2933) 220V 3-PH

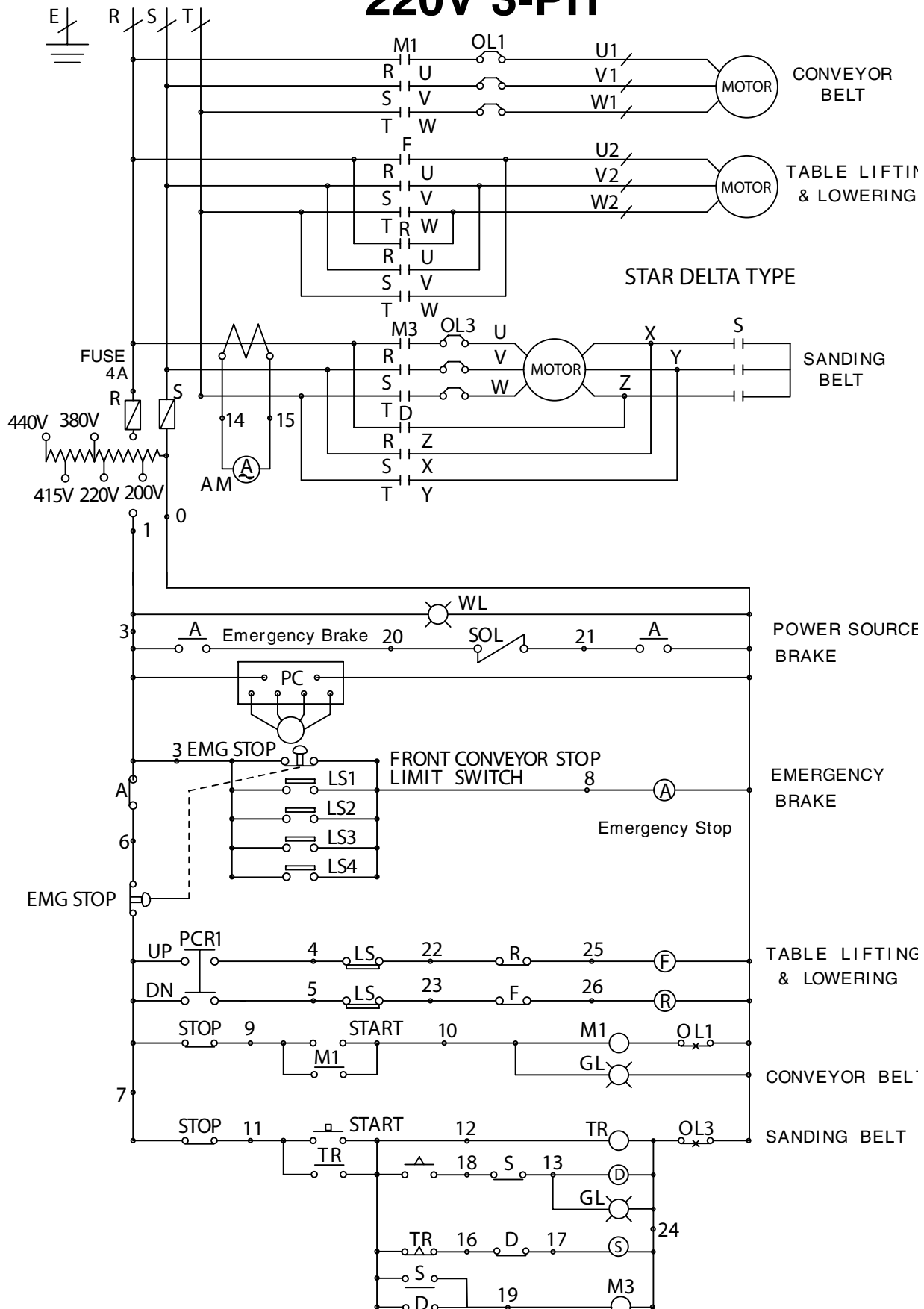


General Electrical Diagram (H2934/G0447)

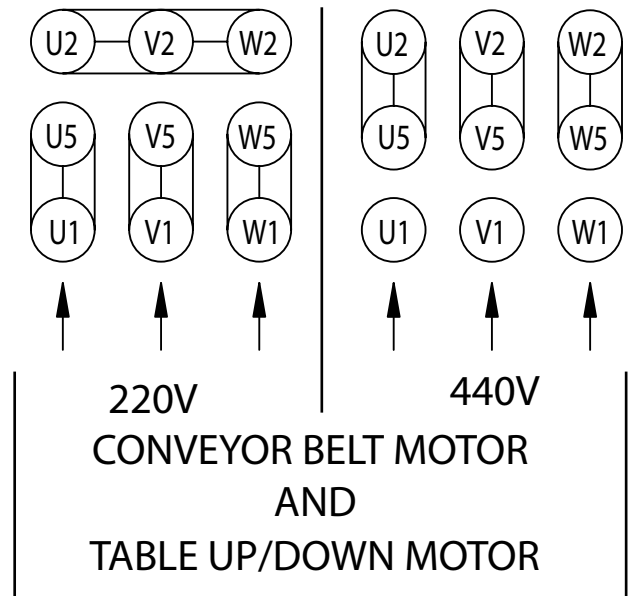
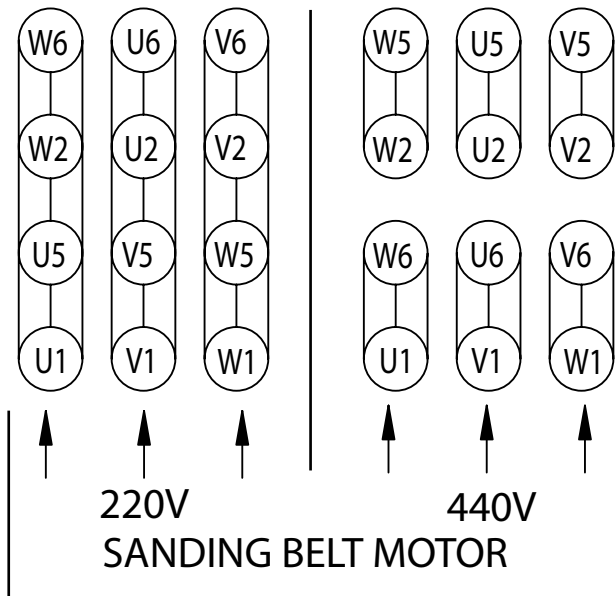
220V 3-PH



General Electrical Diagram (G0581) 220V 3-PH

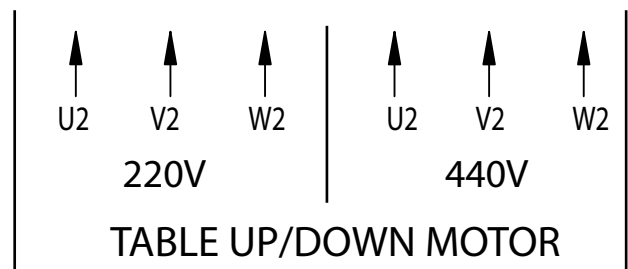
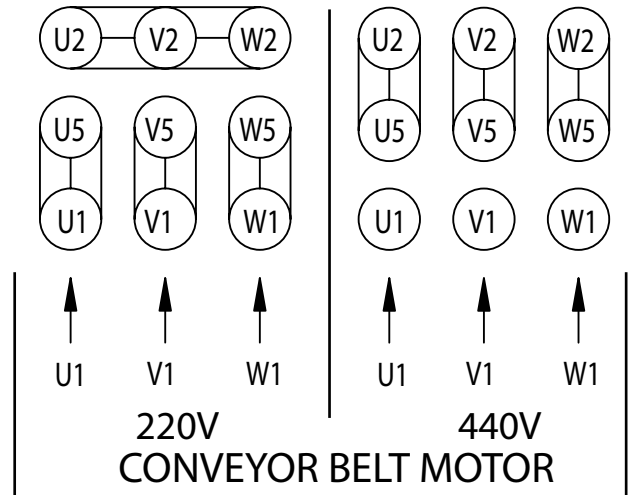
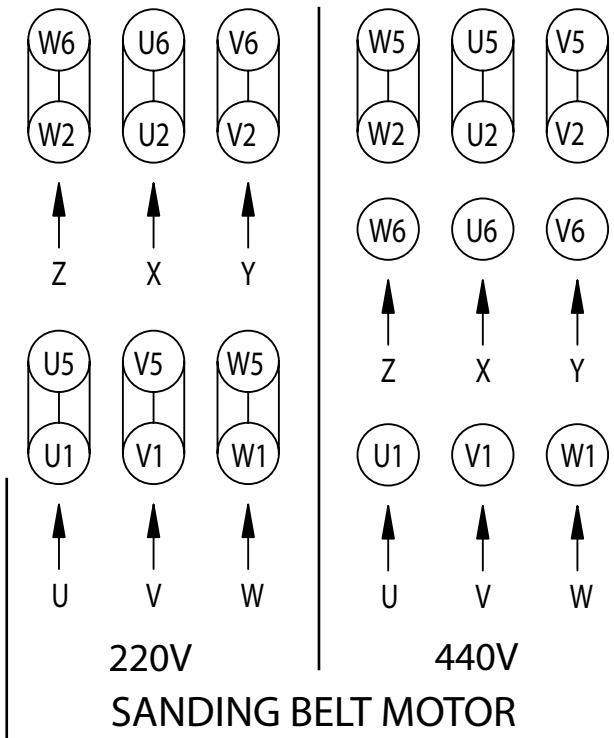


Motor Wiring (H2933) 220V-440V 3-PH



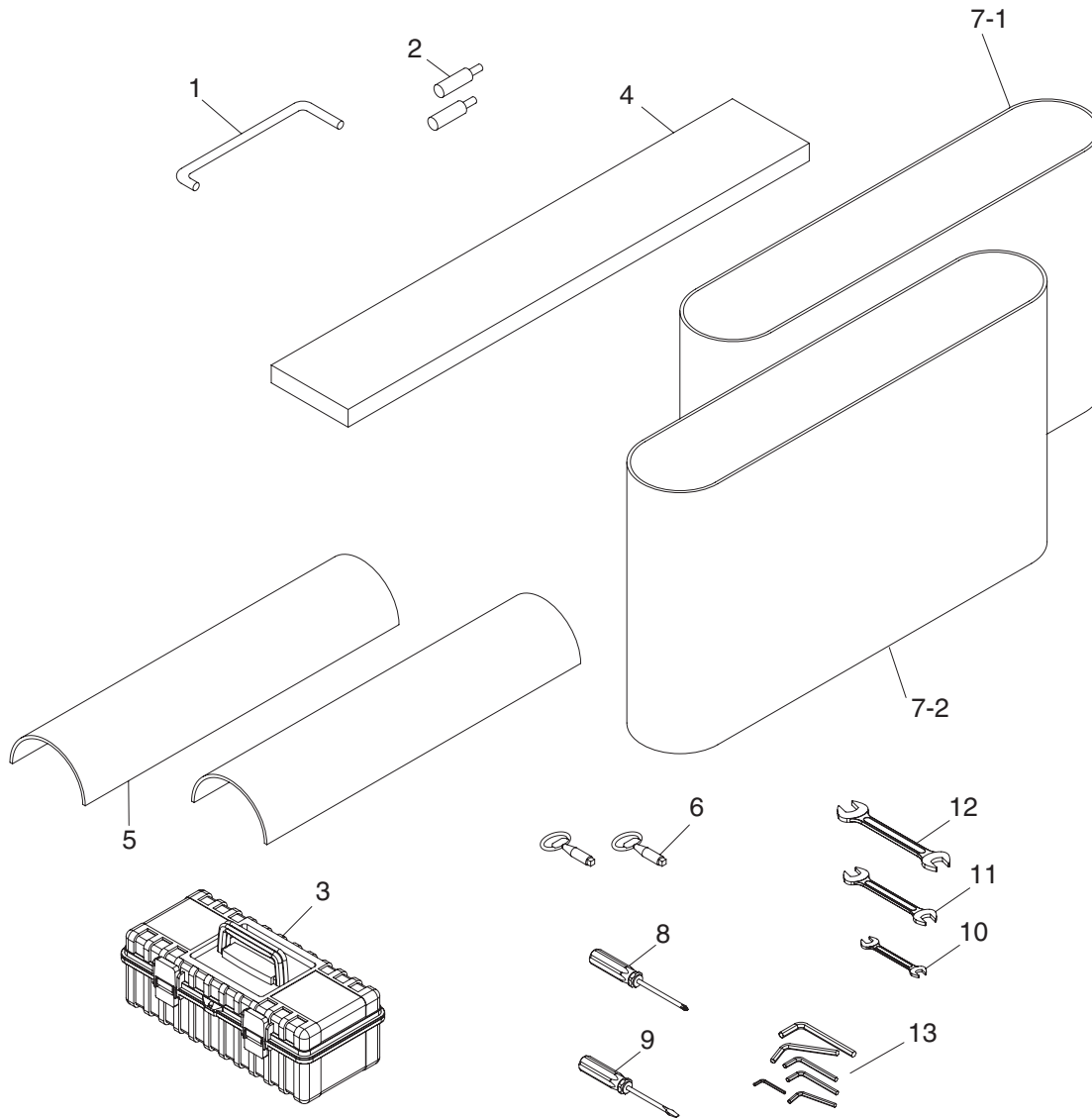
Motor Wiring (H2934/G0447/G0581) 220V-440V 3-PH

(STAR DELTA)



Tool Box and Accessories Diagram

0000 Series Parts



Tool Box and Accessories Parts List

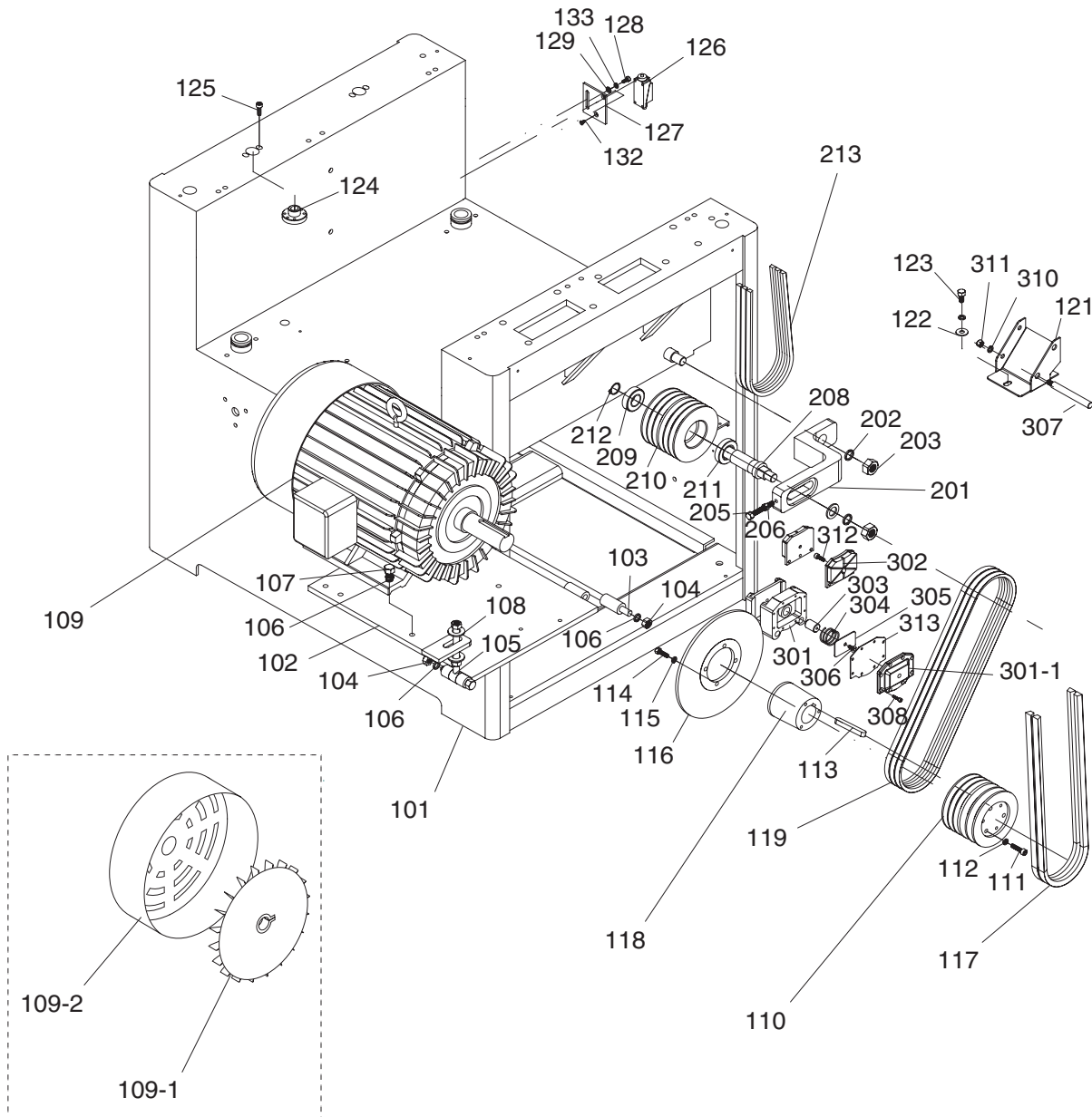
| REF PART # | DESCRIPTION |
|------------|---|
| 1 | PH29330001 PLATEN REMOVAL TOOL |
| 2 | PH29330002 CERAMIC LIMIT SWITCH TIP |
| 3 | PH29330003 TOOL BOX |
| 4 | PH29330004 25" FELT PLATEN PAD (H2933) |
| 4 | PH29340004 37-3/4" PLATEN FELT (H2934/G0447) |
| 4 | P05810004 44" PLATEN FELT (G0581) |
| 5 | PH29330005 GRAPHITE 25" X 3.54" (H2933) |
| 5 | PH29340005 GRAPHITE 37-3/4" X 3.54" (H2934/G0447) |
| 5 | P05810005 GRAPHITE 44" X 3.54" (G0581) |
| 6 | PH29330006 DOOR KEY |
| 7-1 | PH29330007-1 SANDPAPER #100 (25" X 60") (H2933) |
| 7-1 | P05810007-1 SANDPAPER #100 (43" X 60") (G0581) |
| 7-1 | PH29340007-1 SANDPAPER #100 (37" X 60") (H2934) |

| REF PART # | DESCRIPTION |
|------------|---|
| 7-1 | P04470007-1 SANDPAPER #100 (37" X 75") (G0447) |
| 7-2 | PH29330007-2 SANDPAPER #180 (25" X 60") (H2933) |
| 7-2 | PH29340007-2 SANDPAPER #180 (37" X 60") (H2934) |
| 7-2 | P04470007-2 SANDPAPER #180 (37" X 75") (G0447) |
| 7-2 | P05810007-2 SANDPAPER #180 (43" X 60") (G0581) |
| 8 | PSDP2 #2 PHILLIPS SCREWDRIVER |
| 9 | PSDS2 #2 STANDARD SCREWDRIVER |
| 10 | PWR810 WRENCH 8 X 10 |
| 11 | PWR1214 WRENCH 12 X 14 |
| 12 | PWR1719 WRENCH 17 X 19 |
| 13 | PH29330013 HEX WRENCH SET |



Sanding Motor System Diagram

1000 Series Parts



Sanding Motor System Parts List

| REF | PART # | DESCRIPTION |
|-------|--------------|--|
| 101 | PH29331101 | MACHINE FRAME (H2933) |
| 101 | PH29341101 | MACHINE FRAME (H2934/G0447) |
| 101 | P05811101 | MACHINE FRAME (G0581) |
| 102 | PH29331102 | MOTOR BASE (H2933) |
| 102 | PH29341102 | MOTOR BASE (H2934/G0447) |
| 102 | P05811102 | MOTOR BASE (G0581) |
| 103 | P05811103 | MOTOR BASE HINGE (G0581) |
| 103 | PH29331103 | MOTOR BASE HINGE (H2933) |
| 103 | PH29341103 | MOTOR BASE HINGE (H2934/G0447) |
| 104 | PH29331104 | HEX NUT 1/2-12 |
| 105 | PH29331105 | MOTOR BASE ADJUSTMENT ROD |
| 106 | PH29331106 | LOCK WASHER 1/2 |
| 107 | PH29331107 | HEX BOLT 1/2-12 X 1-1/2 |
| 108 | PH29331108 | FLAT WASHER 1/2 |
| 109 | PH29331109 | MOTOR 15HP 220V/440V 3PH (H2933) |
| 109 | PH29341109 | MOTOR 20HP 220V/440V 3PH (H2934/G0447) |
| 109 | P05811109 | MOTOR 25HP 220V/440V 3PH (G0581) |
| 109-1 | PH29331109-1 | MOTOR FAN (H2933) |
| 109-1 | PH29341109-1 | MOTOR FAN (H2934/G0447) |
| 109-1 | P05811109-1 | MOTOR FAN (G0581) |
| 109-2 | PH29331109-2 | MOTOR FAN COVER (H2933) |
| 109-2 | PH29341109-2 | MOTOR FAN COVER (H2934/G0447) |
| 109-2 | P05811109-2 | MOTOR FAN COVER (G0581) |
| 110 | PH29331110 | PULLEY (H2933) |
| 110 | PH29341110 | PULLEY (H2934/G0447) |
| 110 | P05811110 | PULLEY (G0581) |
| 111 | PSB11 | CAP SCREW 5/16-18 X 1-1/4 |
| 112 | PLW01 | LOCK WASHER 5/16 |
| 113 | PH29331113 | KEY 12 X 8 X105 |
| 114 | PB03 | HEX BOLT 5/16-18 X 1 |
| 115 | PLW01 | LOCK WASHER 5/16 |
| 116 | PH29331116 | ROTOR |
| 117 | PVB76 | V-BELT B-76 5L760 |
| 118 | PH29331118 | PULLEY BUSHING (H2933) |

| REF | PART # | DESCRIPTION |
|-------|--------------|------------------------------|
| 118 | PH29341118 | PULLEY BUSHING (H2934/G0447) |
| 118 | P05811118 | PULLEY BUSHING (G0581) |
| 119 | PVA50 | V-BELT A-50 4L500 |
| 121 | PH29331121 | BRAKE BRACKET |
| 122 | PW02 | FLAT WASHER 3/8 |
| 123 | PB21 | HEX BOLT 3/8-16 X 3/4 |
| 124 | PH29331124 | FLAT HEAD NUT |
| 125 | PSB05 | CAP SCREW 1/4-20 X 3/4 |
| 126 | PH29331126 | LIMIT SWITCH |
| 127 | PH29331127 | LIMIT SWITCH PLATE |
| 128 | PB19 | HEX BOLT 1/4-20 X 1/2 |
| 129 | PW06 | FLAT WASHER 1/4 |
| 132 | PFH12M | FLAT HD SCR M6-1 X 25 |
| 133 | PLW02 | LOCK WASHER 1/4 |
| 201 | PH29331201 | IDLE WHEEL ADJ BRACKET |
| 202 | PLW10 | LOCK WASHER 3/4 |
| 203 | PN06 | HEX NUT 1/2-12 |
| 205 | PH29331205 | HEX BOLT 3/8-16 X 3-1/2 |
| 206 | PN08 | HEX NUT 3/8-16 |
| 208 | PH29331208 | IDLE WHEEL SHAFT |
| 209 | P6305 | BALL BEARING 6305ZZ |
| 210 | PH29331210 | PULLEY |
| 211 | P6206 | BALL BEARING 6206ZZ |
| 212 | PR11M | EXT RETAINING RING 25MM |
| 213 | PVA40 | V-BELT A-40 4L400 |
| 301 | PH29331301 | BRAKE BRACKET |
| 301-1 | PH29331301-1 | BREAK BRACKET FRONT GUARD |
| 302 | PH29331302 | BRAKE LINING SET |
| 303 | PH29331303 | BRAKE ARBOR |
| 304 | PH29331304 | BRAKE COMPRESSION SPRING |
| 305 | PH29331305 | BRAKE INSIDE PIECE |
| 306 | PFH04 | FLAT HD SCR 1/4-20 X 5/8 |
| 307 | PH29331307 | BRAKE PIN |
| 308 | PSB31 | CAP SCREW 10-24 X 5/8 |
| 310 | PLW04 | LOCK WASHER 3/8 |
| 311 | PN08 | HEX NUT 3/8-16 |
| 312 | PSB04 | CAP SCREW 1/4-20 X 1/2 |
| 313 | PH29331313 | BRAKE GASKET |



Table Lift System Diagram

2000 Series Parts

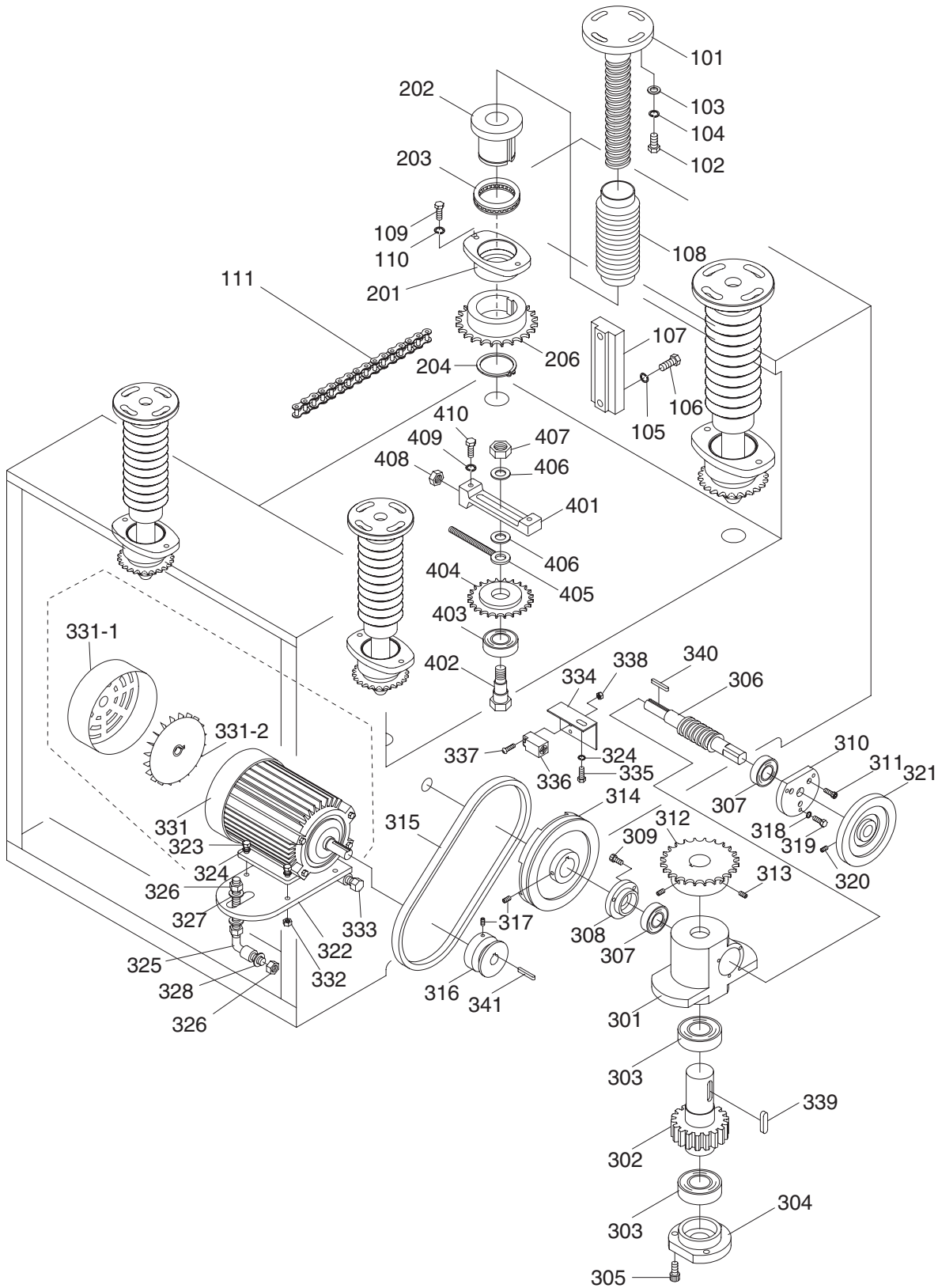


Table Lift System Parts List

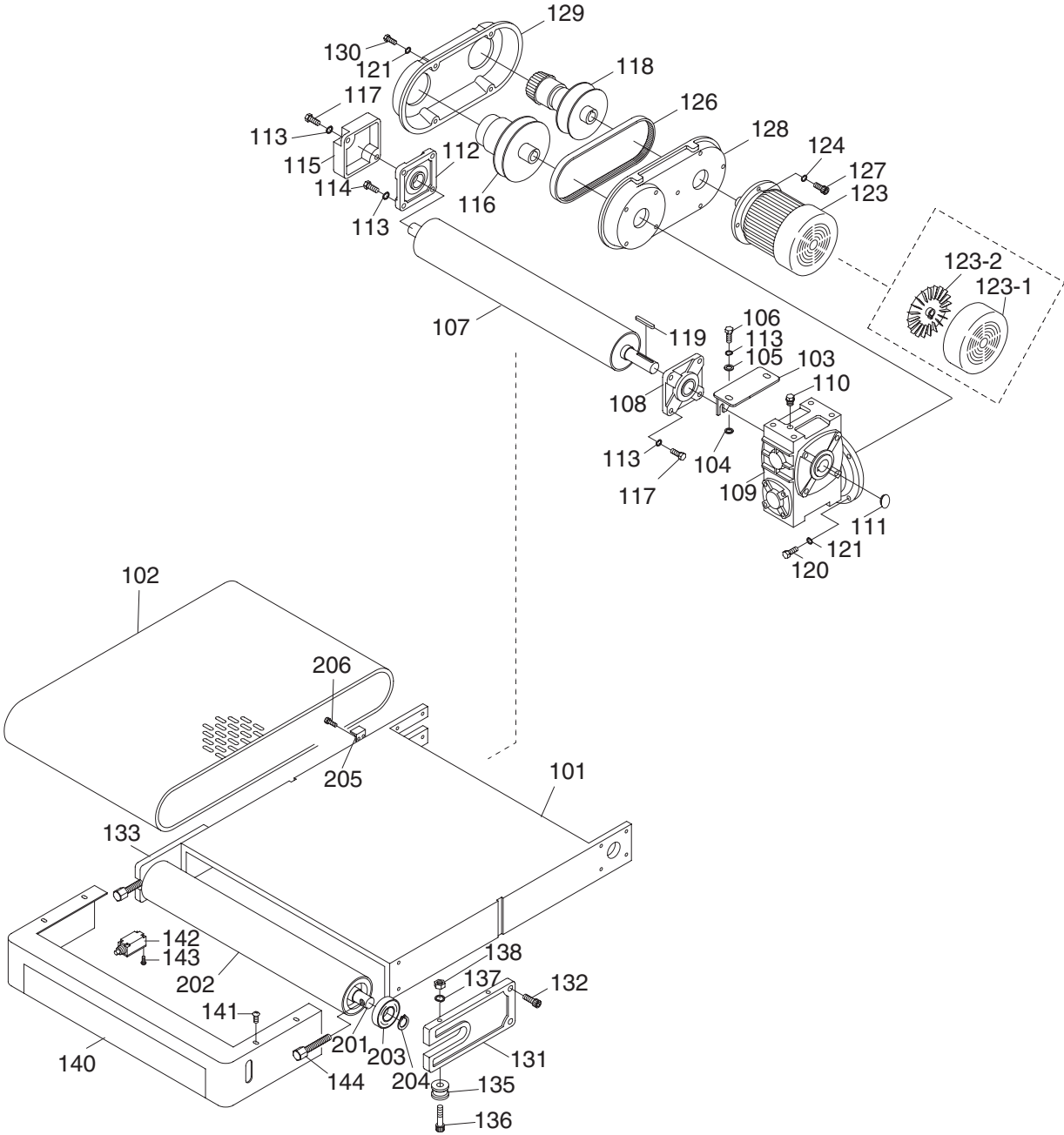
| REF | PART # | DESCRIPTION |
|-----|------------|-------------------------|
| 101 | PH29332101 | ELEVATION SCREW |
| 102 | PB03 | HEX BOLT 5/16-18 X 1 |
| 103 | PW07 | FLAT WASHER 5/16 |
| 104 | PLW01 | LOCK WASHER 5/16 |
| 105 | PLW04 | LOCK WASHER 3/8 |
| 106 | PB18 | HEX BOLT 3/8-16 X 1 |
| 107 | PH29332107 | ELEVATION SLIDE |
| 108 | PH29332108 | DUST BOOT |
| 109 | PB07 | HEX BOLT 5/16-18 X 3/4 |
| 110 | PLW01 | LOCK WASHER 5/16 |
| 111 | PH29332111 | CHAIN (H2933) |
| 111 | PH29342111 | CHAIN (H2934/G0447) |
| 111 | P0581111 | CHAIN (G0581) |
| 201 | PH29332201 | NUT HOUSING |
| 202 | PH29332202 | NUT |
| 203 | P51107 | THRUST BEARING 51107 |
| 204 | PR12M | EXT RETAINING RING 35MM |
| 206 | PH29332206 | SPROCKET WHEEL |
| 301 | PH29332301 | ELEVATION GEAR BOX |
| 302 | PH29332302 | WORM GEAR |
| 303 | P6005 | BALL BEARING 6005ZZ |
| 304 | PH29332304 | BEARING CAP |
| 305 | PSB05 | CAP SCREW 1/4-20 X 3/4 |
| 306 | PH29332306 | WORM SHAFT |
| 307 | P6002 | BALL BEARING 6002ZZ |
| 308 | PH29332308 | BEARING CAP |
| 309 | PSB33 | CAP SCREW 10-24 x 3/4 |
| 310 | PH29332310 | BEARING CAP |
| 311 | P9962Z2311 | CAP SCREW 1/4-20 X 5/8 |
| 312 | PH29332312 | SPROCKET WHEEL |
| 313 | PSS07 | SET SCREW 1/4-20 X 1/2 |
| 314 | PH29332314 | PULLEY |
| 315 | PVA36 | V-BELT A-36 4L360 |
| 316 | PH29332316 | PULLEY |
| 317 | PSS07 | SET SCREW 1/4-20 X 1/2 |

| REF | PART # | DESCRIPTION |
|-------|--------------|---|
| 318 | PLW01 | LOCK WASHER 5/16 |
| 319 | PB07 | HEX BOLT 5/16-18 X 3/4 |
| 320 | PSS07 | SET SCREW 1/4-20 X 1/2 |
| 321 | PH29332321 | HAND WHEEL |
| 322 | PH29332322 | MOTOR BASE |
| 323 | PB31 | HEX BOLT 1/4-20 X 1 |
| 324 | PLW02 | LOCK WASHER 1/4 |
| 325 | PH29332325 | ADJUSTMENT ROD |
| 326 | PW01 | FLAT WASHER 1/2 |
| 327 | PN06 | HEX NUT 1/2-12 |
| 328 | PLW07 | LOCK WASHER 1/2 |
| 331 | PH29332331 | MOTOR 1/4HP 220V/440V 3PH (ALL MODELS) |
| 331-1 | PH29332331-1 | FAN COVER (ALL MODELS) |
| 331-2 | PH29332331-2 | FAN (ALL MODELS) |
| 332 | PN05 | HEX NUT 1/4-20 |
| 333 | PB89 | HEX BOLT 1/2-12 X 4-1/2 |
| 334 | PH29332334 | PROXIMITY SWITCH PLATE |
| 335 | PB19 | HEX BOLT 1/4-20 X 1/2 |
| 336 | PH29332336 | PROXIMITY SWITCH |
| 337 | PH29332337 | SPECIAL SCREW M3-.5 X 40 |
| 338 | PN07M | HEX NUT M3-.5 |
| 339 | PK14 | KEY 5/16 X 5/16 X 3/4 |
| 340 | PK48M | KEY 4 X 4 X 20 |
| 341 | PK37M | KEY 4 X 4 X 16 |
| 401 | PH29332401 | SPROCKET WHEEL ADJUSTOR |
| 402 | PH29332402 | SPROCKET WHEEL SHAFT |
| 403 | P6003 | BALL BEARING 6003ZZ |
| 404 | PH29332404 | ADJUSTMENT SPROCKET |
| 405 | PH29332405 | ADJUSTMENT ROD |
| 406 | PW02 | FLAT WASHER 3/8 |
| 407 | PN08 | HEX NUT 3/8-16 |
| 408 | PN02 | HEX NUT 5/16-18 |
| 409 | PLW01 | LOCK WASHER 5/16 |
| 410 | PB07 | HEX BOLT 5/16-18 X 3/4 |



Conveyor System Diagram

3000 Series Parts



Conveyor System Parts List

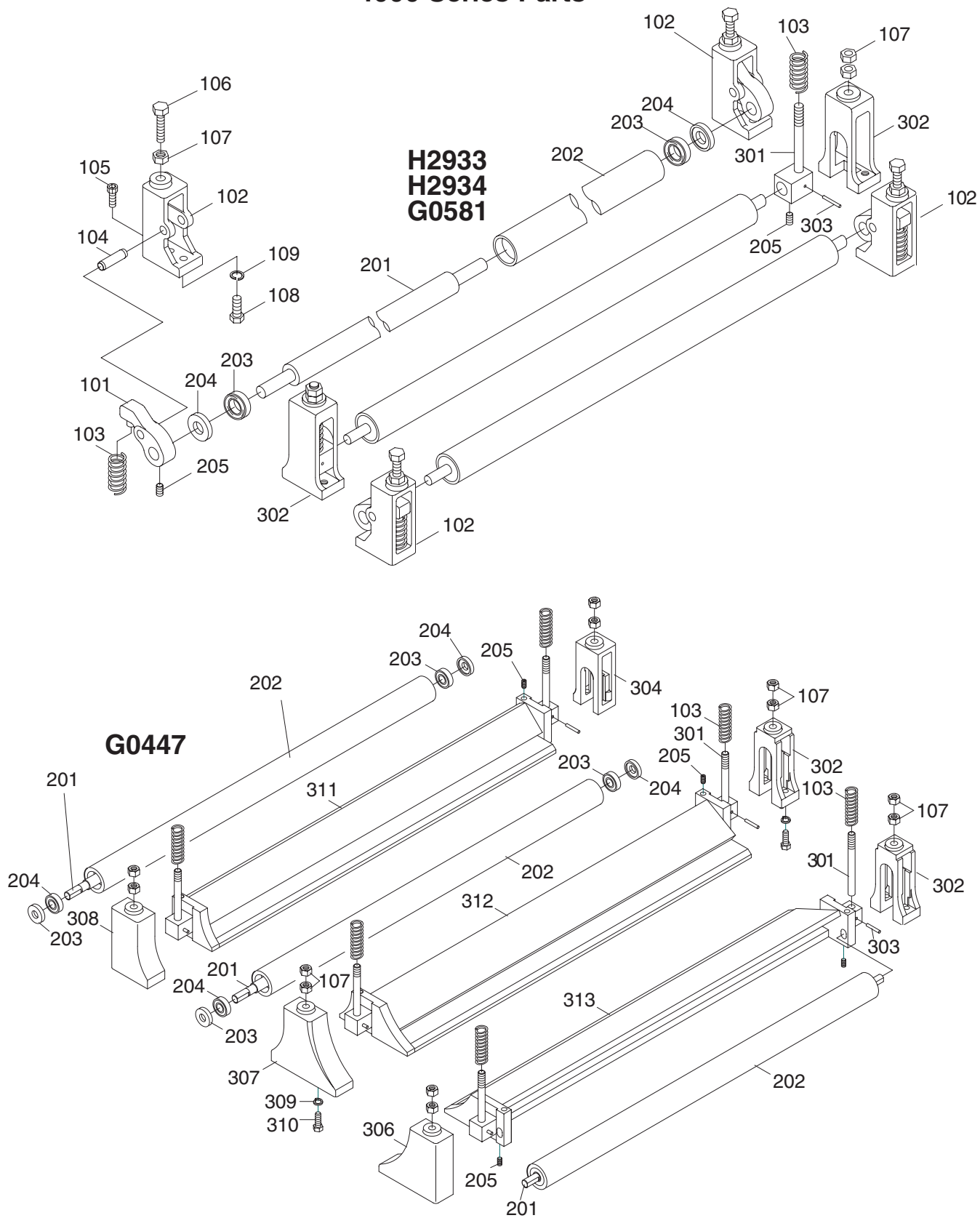
| REF | PART # | DESCRIPTION |
|-------|--------------|--|
| 101 | PH29333101 | CONVEYOR TABLE (H2933) |
| 101 | PH29343101 | CONVEYOR TABLE (H2934/G0447) |
| 101 | P05813101 | CONVEYOR TABLE (G0581) |
| 102 | PH29333102 | CONVEYOR BELT (H2933) |
| 102 | PH29343102 | CONVEYOR BELT (H2934/G0447) |
| 102 | P05813102 | CONVEYOR BELT(G0581) |
| 103 | PH29333103 | REDUCER FIX PLATE |
| 104 | PH29333104 | CUSHION |
| 105 | PLW04 | LOCK WASHER 3/8 |
| 106 | PB18 | HEX BOLT 3/8-16 X 1 |
| 107 | PH29333107 | OUTFEED ROLLER (H2933) |
| 107 | PH29343107 | OUTFEED ROLLER (H2934/G0447) |
| 107 | P05813107 | OUTFEED ROLLER (G0581) |
| 108 | PH29333108 | BEARING UCF206 |
| 109 | PH29333109 | GEARBOX |
| 110 | PH29333110 | BREATHER |
| 111 | PH29333111 | PLUG |
| 112 | PUCF205 | BALL BEARING UCF205 |
| 113 | PLW04 | LOCK WASHER 3/8 |
| 114 | PB24 | HEX BOLT 3/8-16 X 1-1/4 |
| 115 | PH29333115 | BEARING CAP |
| 116 | PH29333116 | DRIVEN PULLEY |
| 117 | PB16 | HEX BOLT 3/8-16 X 1-1/2 |
| 118 | PH29333118 | DRIVING PULLEY |
| 119 | PK66M | KEY 7 X 7 X 55 |
| 120 | PB07M | HEX BOLT M8-1.25 X 25 |
| 121 | PLW04M | LOCK WASHER 8MM |
| 123 | PH29333123 | MOTOR 1HP 220V/440V 3PH (H2933, H2934, G0447) |
| 123 | P05813123 | MOTOR 2HP 220V/440V 3PH (G0581) |
| 123-1 | PH29333123-1 | MOTOR FAN COVER (H2933, H2934, G0447) |

| REF | PART # | DESCRIPTION |
|-------|--------------|--|
| 123-1 | P05813123-1 | MOTOR FAN COVER (G0581) |
| 123-2 | PH29333123-2 | MOTOR FAN (H2933, H2934, G0447) |
| 123-2 | P05813123-2 | MOTOR FAN (G0581) |
| 124 | PLW06 | LOCK WASHER 5/8 |
| 126 | PH29333126 | TIMING BELT 1422V-290 |
| 127 | PSB64M | CAP SCREW M10-1.5 X 25 |
| 128 | PH29333128 | BASE PLATE |
| 129 | PH29333129 | VARIABLE SPEED UNIT COVER |
| 130 | PB09M | HEX BOLT M8-1.25 X 20 |
| 131 | PH29333131 | INFEED ROLLER BRACKET |
| 132 | PSB33 | CAP SCREW 10-24 x 3/4 |
| 133 | PH29333133 | INFEED ROLLER BRACKET |
| 135 | PH29333135 | CONVEYOR POSITION WHEEL |
| 136 | PSB70 | CAP SCREW 5/16-18 X 2 |
| 137 | PLW01 | LOCK WASHER 5/16 |
| 138 | PN02 | HEX NUT 5/16-18 |
| 140 | P29333140 | EMGNCY BRAKE PUSH-PLATE (H2933) |
| 140 | PH29343140 | EMGNCY BRAKE PUSH-PLATE (H2943/G0447) |
| 140 | P05813140 | EMGNCY BRAKE PUSH-PLATE (G0581) |
| 141 | PH29333141 | PHLP HD SCR 1/4-20 X 1/2 |
| 142 | PH29333142 | LIMIT SWITCH |
| 143 | PS10 | PHLP HD SCR 10-24 x 1 1/2 |
| 144 | PB95 | HEX BOLT 1/2-12 X 3 |
| 201 | PH29333201 | INFEED ROLLER SHAFT |
| 202 | PH29333202 | INFEED ROLLER (H2933) |
| 202 | PH29343202 | INFEED ROLLER (H2934/G0447) |
| 202 | PG05813202 | INFEED ROLLER (G0581) |
| 203 | P6206 | BALL BEARING 6206 RS |
| 204 | PR15M | EXT RETAINING RING 30MM |
| 205 | PH29333205 | ELEVATION LIMITER |
| 206 | PSB62 | CAP SCREW 1/4-20 X 1-1/2 |



Feed, Drum, and Pressure Roller Diagram

4000 Series Parts



Feed, Drum, and Pressure Roller Parts List

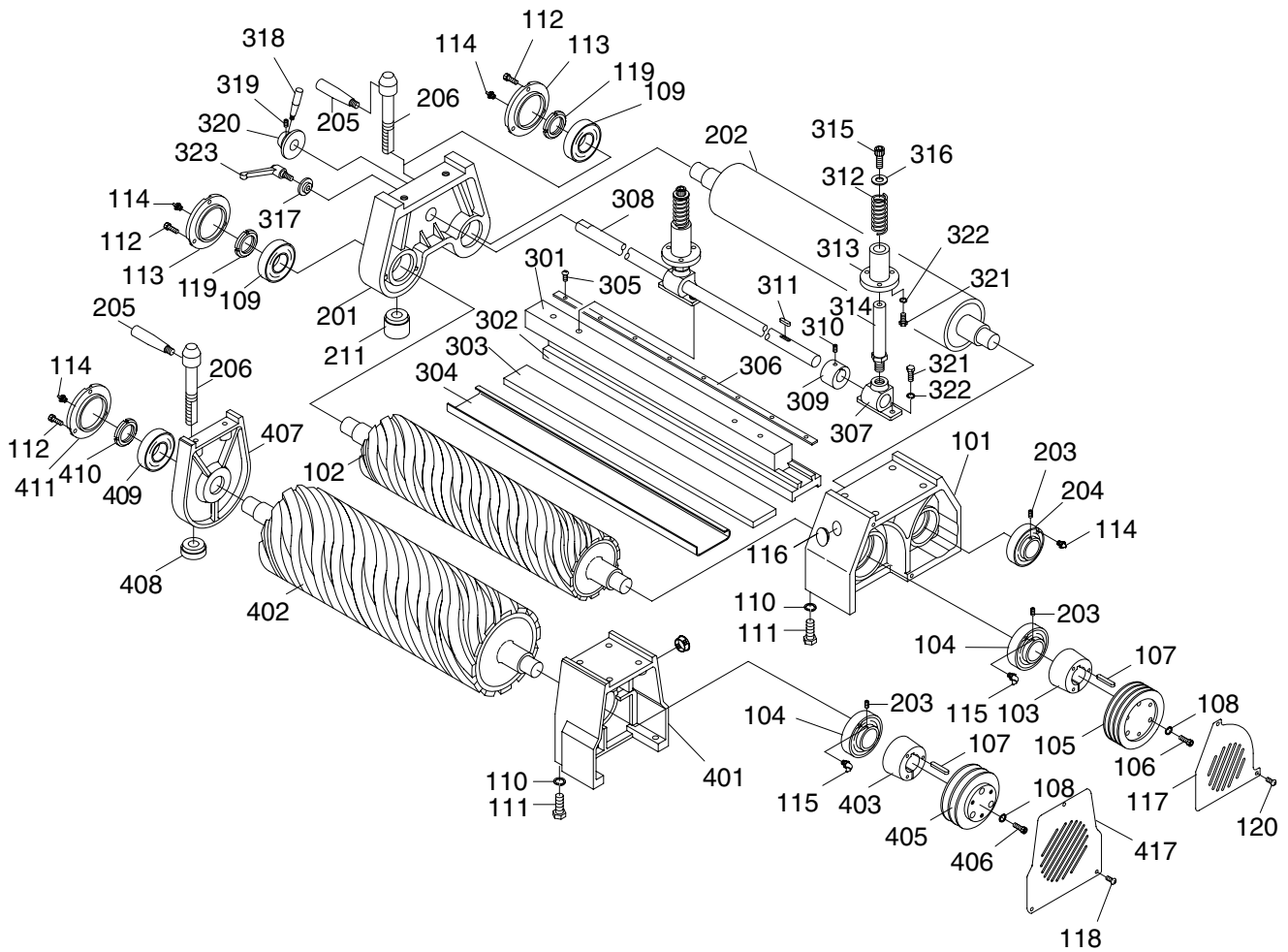
| REF | PART # | DESCRIPTION |
|-----|------------|---|
| 101 | PH29334101 | PISTON SLIDERAIL |
| 102 | PH29334102 | PISTON BRACKET OUTER (H2933/H2934/G0581) |
| 103 | PH29334103 | COMPRESSION SPRING |
| 104 | PH29334104 | ROD 10 X 35 |
| 105 | PSS07 | SET SCREW 1/4-20 X 1/2 |
| 106 | PB11 | HEX BOLT 5/16-18 X 1-1/2 |
| 107 | PN02 | HEX NUT 5/16-18 |
| 108 | PB12 | HEX BOLT 5/16-18 X 1-1/4 |
| 109 | PLW01 | LOCK WASHER 5/16 |
| 201 | PH29334201 | PISTON ROLLER SHAFT (H2933) |
| 201 | P04474201 | PISTON ROLLER SHAFT (H2934/G0447) |
| 201 | P05814201 | PISTON ROLLER SHAFT (G0581) |
| 202 | PH29334202 | PISTON ROLLER (H2933) |
| 202 | P04474202 | PISTON ROLLER (H2934/G0447) |
| 202 | PG05814202 | PISTON ROLLER (G0581) |
| 203 | P6003 | BALL BEARING 6003ZZ |

| REF | PART # | DESCRIPTION |
|-----|------------|------------------------------------|
| 204 | PH29334204 | SHAFT BEARING COLLAR |
| 205 | PSS07 | SET SCREW 1/4-20 X 1/2 |
| 301 | PH29334301 | GUIDE STUD (H2933/H2934/G0581) |
| 301 | P04474301 | GUIDE STUD (G0447) |
| 302 | PH29334302 | PISTON BRACKET MIDDLE |
| 303 | PRP55M | ROLL PIN 3 X 27 |
| 304 | P04474304 | RR PISTON BRACKET (G0447) |
| 306 | P04474306 | LF PISTON BRACKET (G0447) |
| 307 | P04474307 | L MIDDLE PISTON BRACKET (G0447) |
| 308 | P04474308 | LR PISTON BRACKET (G0447) |
| 309 | PLW01 | LOCK WASHER 5/16 |
| 310 | PB12 | HEX BOLT 5/16-18 X 1-1/4 |
| 311 | P04475311 | REAR DEFLECTOR (G0447) |
| 312 | P04475312 | MIDDLE DEFLECTOR (G0447) |
| 313 | P04475313 | FRONT DEFLECTOR (G0447) |



Sanding Drum and Platen Diagram

5000 Series Parts



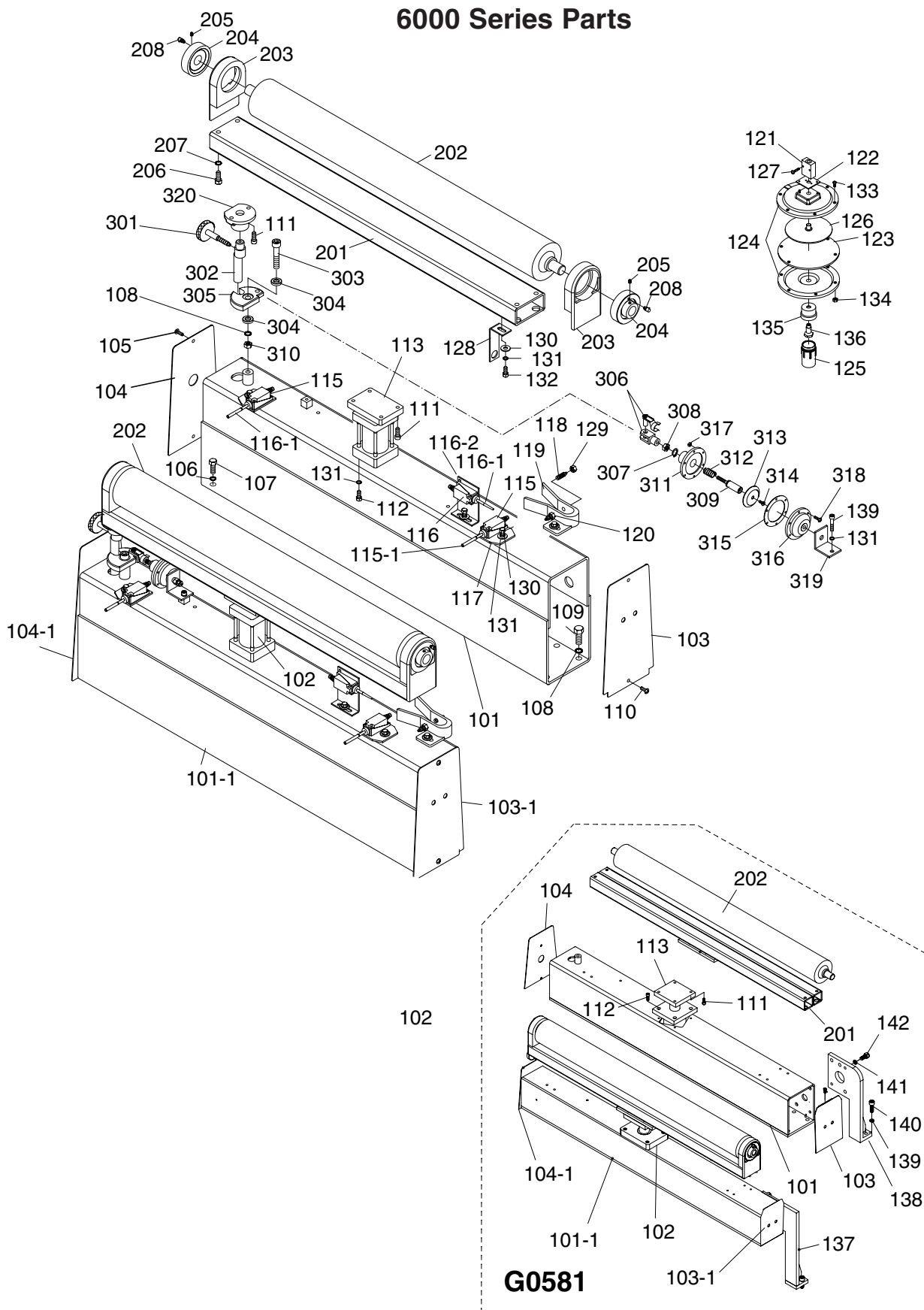
Sanding Drum and Platen Parts List

| REF | PART # | DESCRIPTION |
|-----|------------|---|
| 101 | PH29335101 | BEARING HOUSING |
| 102 | PH29335102 | RUBBER ROLLER (H2933) |
| 102 | PH29345102 | RUBBER ROLLER (H2934/G0447) |
| 102 | P05815102 | RUBBER ROLLER (G0581) |
| 103 | PH29335103 | FASTENING TUBE |
| 104 | PH29335104 | BEARING UCC206 |
| 105 | PH29335105 | PULLEY |
| 106 | PSB11 | CAP SCREW 5/16-18 X 1-1/4 |
| 107 | PK11 | KEY 5/16 X 5/16 X 1 3/16 |
| 108 | PLW01 | LOCK WASHER 5/16 |
| 109 | P6205 | BALL BEARING 6205ZZ |
| 110 | PLW07 | LOCK WASHER 1/2 |
| 111 | PSB76 | CAP SCREW 1/2-12 X 1-1/2 |
| 112 | PSB04 | CAP SCREW 1/4-20 X 1/2 |
| 113 | PH29335113 | BEARING CAP |
| 114 | PH29335114 | GREASE FITTING W/CAP |
| 115 | PH29335115 | GREASE FITTING W/CAP |
| 116 | PH29335116 | PLUG |
| 117 | PH29335117 | PULLEY COVER |
| 118 | PS04 | PHLP HD SCR 1/4-20 X 1/2 |
| 119 | PH29335119 | SPANNER NUT |
| 201 | PH29335201 | BEARING HOUSING |
| 202 | PH29335202 | STEEL ROLLER (H2933) |
| 202 | PH29345202 | STEEL ROLLER (H2934/G0447) |
| 202 | P05815202 | STEEL ROLLER (G0581) |
| 203 | PH29335203 | SPECIAL SET SCREW M6-.75 X 6 |
| 204 | PH29335204 | BEARING UCC205 |
| 205 | PH29335205 | HANDLE |
| 206 | PH29335206 | SPECIAL SCREW |
| 211 | PH29335211 | BEARING BRACKET PAD (H2933) |
| 301 | PH29335301 | 25" GRAPHITE BRACKET MALE (H2933) |
| 301 | PH29345301 | 37-1/2" GRAPHITE BRACKET MALE (H2934/G0447) |
| 301 | P05815301 | 44" GRAPHITE BRACKET MALE (G0581) |
| 302 | PH29335302 | 25" GRAPHITE BRACKET FEMALE (H2933) |
| 302 | PH29345302 | 37-1/2" GRAPHITE BRACKET FEMALE (H2934/G0447) |
| 302 | P05815302 | 44" GRAPHITE BRACKET FEMALE (G0581) |
| 303 | PH29335303 | 25" FELT PLATEN PAD (H2933) |
| 303 | PH29345303 | 37-1/2" FELT PLATEN PAD (H2934/G0447) |
| 303 | P05815303 | 44" FELT PLATEN PAD (G0581) |
| 120 | XPS07 | PHLP HD SCR 1/4-20 X 3/8 |

| REF | PART # | DESCRIPTION |
|-----|------------|---|
| 304 | PH29335304 | GRAPHITE 25" x 3.54" (H2933) |
| 304 | PH29345304 | GRAPHITE 37-3/4" X 3.54" (H2934/G0447) |
| 304 | P05815304 | GRAPHITE 44" X 3.54" (G0581) |
| 305 | PS01 | PHLP HD SCR 10-24 X 1/2 |
| 306 | PH29335306 | 25" GRAPHITE PRESSURE PLATE (H2933) |
| 306 | PH29345306 | 37-1/2" GRAPHITE PRESSURE PLATE (H2934/G0447) |
| 306 | P05815306 | 44" GRAPHITE PRESSURE PLATE (G0581) |
| 307 | PH29335307 | GRAPHITE BRACKET BASE |
| 308 | PH29335308 | GRAPHITE BRACKET SHAFT (H2933) |
| 308 | PH29345308 | GRAPHITE BRACKET SHAFT (H2934/G0447) |
| 308 | P05815308 | GRAPHITE BRACKET SHAFT (G0581) |
| 309 | PH29335309 | LOCK COLLAR |
| 310 | PSS03 | SET SCREW 1/4-20 X 3/8 |
| 311 | PH29335311 | KEY 1/4-20 X 25 |
| 312 | PH29335312 | COMPRESSION SPRING |
| 313 | PH29335313 | HOUSING |
| 314 | PH29335314 | GRAPHITE BRACKET SHAFT |
| 315 | PSB16 | CAP SCREW 3/8-16 X 3/4 |
| 316 | PW02 | FLAT WASHER 3/8 |
| 317 | PW02 | FLAT WASHER 3/8 |
| 318 | PH29335318 | HANDLE |
| 319 | PSS08 | SET SCREW 5/16-18 X 1/2 |
| 320 | PH29335320 | ADJUSTMENT RING |
| 321 | PB03 | HEX BOLT 5/16-18 X 1 |
| 322 | PW07 | FLAT WASHER 5/16 |
| 323 | PH29335323 | HANDLE |
| 401 | PH29335401 | BEARING HOUSING |
| 402 | PH29335402 | RUBBER ROLLER (H2933) |
| 402 | PH29345402 | RUBBER ROLLER (H2934/G0447) |
| 402 | P05815402 | RUBBER ROLLER (G0581) |
| 403 | PH29335403 | FASTENING TUBE |
| 405 | PH29335405 | PULLEY |
| 406 | PSB11 | CAP SCREW 5/16-18 X 1-1/4 |
| 407 | PH29335407 | BEARING HOUSING |
| 408 | PH29335408 | BEARING BRACKET PAD |
| 409 | P6206 | BALL BEARING 6206ZZ |
| 410 | PH29335410 | SPANNER CAP |
| 411 | PH29335411 | BEARING CAP |
| 417 | PH29335417 | PULLEY COVER |



Upper Roller System Diagram



Upper Roller System Parts List

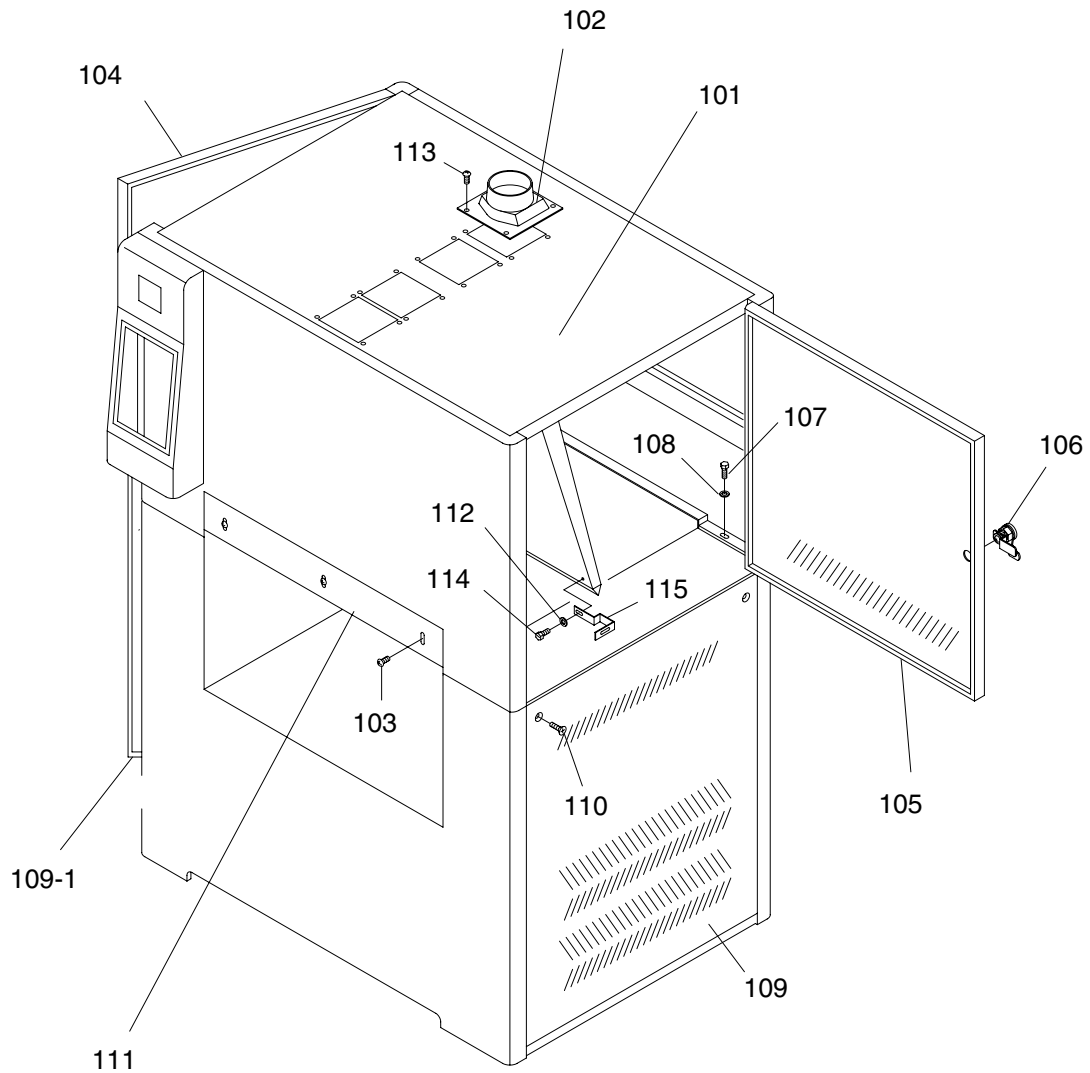
| REF | PART # | DESCRIPTION |
|-------|--------------|-----------------------------|
| 101 | PH29336101 | SQUARE FRAME REAR (H2933) |
| 101 | PH29346101 | SQUARE FRAME REAR (H2934) |
| 101 | P04476101 | SQUARE FRAME REAR (G0447) |
| 101 | P05816101 | SQUARE FRAME REAR (G0581) |
| 101-1 | PH29336101-1 | SQUARE FRAME FRONT (H2933) |
| 101-1 | PH29346101-1 | SQUARE FRAME FRONT (H2934) |
| 101-1 | P04476101-1 | SQUARE FRAME FRONT (G0447) |
| 101-1 | P05816101-1 | SQUARE FRAME FRONT (G0581) |
| 103 | PH29336103 | FRAME SEAL RIGHT (H2933) |
| 103 | PH29346103 | FRAME SEAL RIGHT (H2934) |
| 103 | P04476103 | FRAME SEAL RIGHT (G0447) |
| 103 | P05816103 | FRAME SEAL RIGHT (G0581) |
| 103-1 | PH29336103-1 | FRAME SEAL FRONT (H2933) |
| 103-1 | PH29346103-1 | FRAME SEAL FRNT RT (H2934) |
| 103-1 | P04476103-1 | FRAME SEAL FRNT RT (G0447) |
| 103-1 | P05816103-1 | FRAME SEAL FRNT RT (G0581) |
| 104 | PH29336104 | FRAME SEAL LEFT (H2933) |
| 104 | PH29346104 | FRAME SEAL LEFT (H2934) |
| 104 | P04476104 | FRAME SEAL LEFT (G0447) |
| 104 | P05816104 | FRAME SEAL LEFT (G0581) |
| 104-1 | PH29336104-1 | FRAME SEAL FRNT LFT (H2933) |
| 104-1 | PH29346104-1 | FRAME SEAL FRNT LFT (H2934) |
| 104-1 | P04476104-1 | FRAME SEAL FRNT LFT (G0447) |
| 104-1 | P05816104-1 | FRAME SEAL FRNT LFT (G0581) |
| 105 | PFH03 | FLAT HD SCR 1/4-20 X 1/2 |
| 106 | PLW04 | LOCK WASHER 3/8 |
| 107 | PB18 | HEX BOLT 3/8-16 X 1 |
| 108 | PLW07 | LOCK WASHER 1/2 |
| 109 | PB53 | HEX BOLT 1/2-12 X 1 |
| 110 | PS04 | PHLP HD SCR 1/4-20 X 1/2 |
| 111 | PSB07 | CAP SCREW 5/16-18 X 3/4 |
| 112 | PB03 | HEX BOLT 5/16-18 X 1 |
| 113 | PH29336113 | AIR CYLINDER |
| 115 | PH29336115 | LIMIT SWITCH W/CERAMIC TIP |
| 115-1 | PH29336115-1 | CERAMIC TIP |
| 116 | PH29336116 | LIMIT SWITCH W/PLASTIC TIP |
| 116-1 | PH29336116-1 | PLASTIC TIP |
| 116-2 | PH29336116-2 | LIMIT SWITCH POST |
| 117 | PH29336117 | LIMIT SWITCH HOLDER |
| 118 | PH29336118 | AIR SENSOR NOZZLE FEMALE |
| 119 | PH29336119 | AIR FORK |
| 120 | PH29336120 | AIR SENSOR NOZZLE MALE |
| 121 | PH29336121 | THROTTLE VALVE |
| 122 | PH29336122 | THROTTLE VALVE BASE |
| 123 | PH29336123 | PLATE |
| 124 | PH29336124 | HOUSING ASSEMBLY |
| 125 | PH29336125 | OIL CAP |
| 126 | PH29336126 | ALUMINUM PLATE |

| REF | PART # | DESCRIPTION |
|-----|------------|-------------------------------|
| 127 | PS02M | PHLP HD SCR M4-.7 X 12 |
| 128 | PH29336128 | SHUTDOWN BRACKET |
| 129 | PN11 | HEX NUT 3/8-24 |
| 130 | PW07 | FLAT WASHER 5/16 |
| 131 | PLW01 | LOCK WASHER 5/16 |
| 132 | PB09 | HEX BOLT 5/16-18 X 1/2 |
| 133 | PS08 | PHLP HD SCR 10-24 X 3/4 |
| 134 | PN07 | HEX NUT 10-24 |
| 135 | PH29336135 | CONNECTOR OF OIL CAP |
| 136 | PH29336136 | SHAFT OF OIL CAP |
| 137 | P0581137 | BRACKET (G0581) |
| 138 | P0581138 | BRACKET (G0581) |
| 139 | PSB08 | CAP SCREW 5/16-18 X 1-1/2 |
| 140 | PSB76 | CAP SCREW 1/2-12 X 1-1/2 |
| 141 | PLW07 | LOCK WASHER 1/2 |
| 142 | PB53 | HEX BOLT 1/2-12 X 1 |
| 201 | PH29336201 | BRACKET (H2933, H2934, G0447) |
| 201 | P05816201 | BRACKET (G0581) |
| 202 | P05816202 | UPPER ROLLER (H2933) |
| 202 | PH29336202 | UPPER ROLLER (H2934/G0447) |
| 202 | PH29346202 | UPPER ROLLER (G0581) |
| 203 | PH29336203 | UPPER ROLLER BRACKET |
| 204 | P99625204 | BEARING UCC205 |
| 205 | PSS02M | SET SCREW M6-1 X 6 |
| 206 | PSB33 | CAP SCREW 10-24 x 3/4 |
| 207 | PLW04 | LOCK WASHER 3/8 |
| 208 | PH29336208 | GREASE FITTING W/DUST CAP |
| 301 | P05816301 | KNOB (H2933/H2936/G0447) |
| 301 | PH29336301 | KNOB (G0581) |
| 302 | PH29336302 | ECCENTRIC ROD |
| 303 | PSB79 | CAP SCREW 1/2-12 X 3-1/2 |
| 304 | PW01 | FLAT WASHER 1/2 |
| 305 | PH29336305 | ECCENTRIC |
| 306 | PH29336306 | CLEVIS ASSEMBLY |
| 307 | PRO5M | EXT RETAINING RING 15MM |
| 308 | PN27M | HEX NUT M10-1.5 (LH) |
| 309 | PH29336309 | SHAFT OF AIR CYLINDER |
| 310 | PN06 | HEX NUT 1/2-12 |
| 311 | PH29336311 | BOTTOM COVER |
| 312 | PH29336312 | COMPRESSION SPRING |
| 313 | PH29336313 | ALUMINUM PLATE |
| 314 | PFH02M | FLAT HD SCR M6-1 X 12 |
| 315 | PH29336315 | PLATE |
| 316 | PH29336316 | TOP COVER |
| 317 | PN07 | HEX NUT 10-24 |
| 318 | PS08 | PHLP HD SCR 10-24 X 3/4 |
| 319 | PH29336319 | AIR CYLINDER BASE |
| 320 | PH29336320 | ECCENTRIC SHAFT FRAME |



Cabinet Assembly Diagram

7000 Series Parts



Cabinet Assembly Parts List

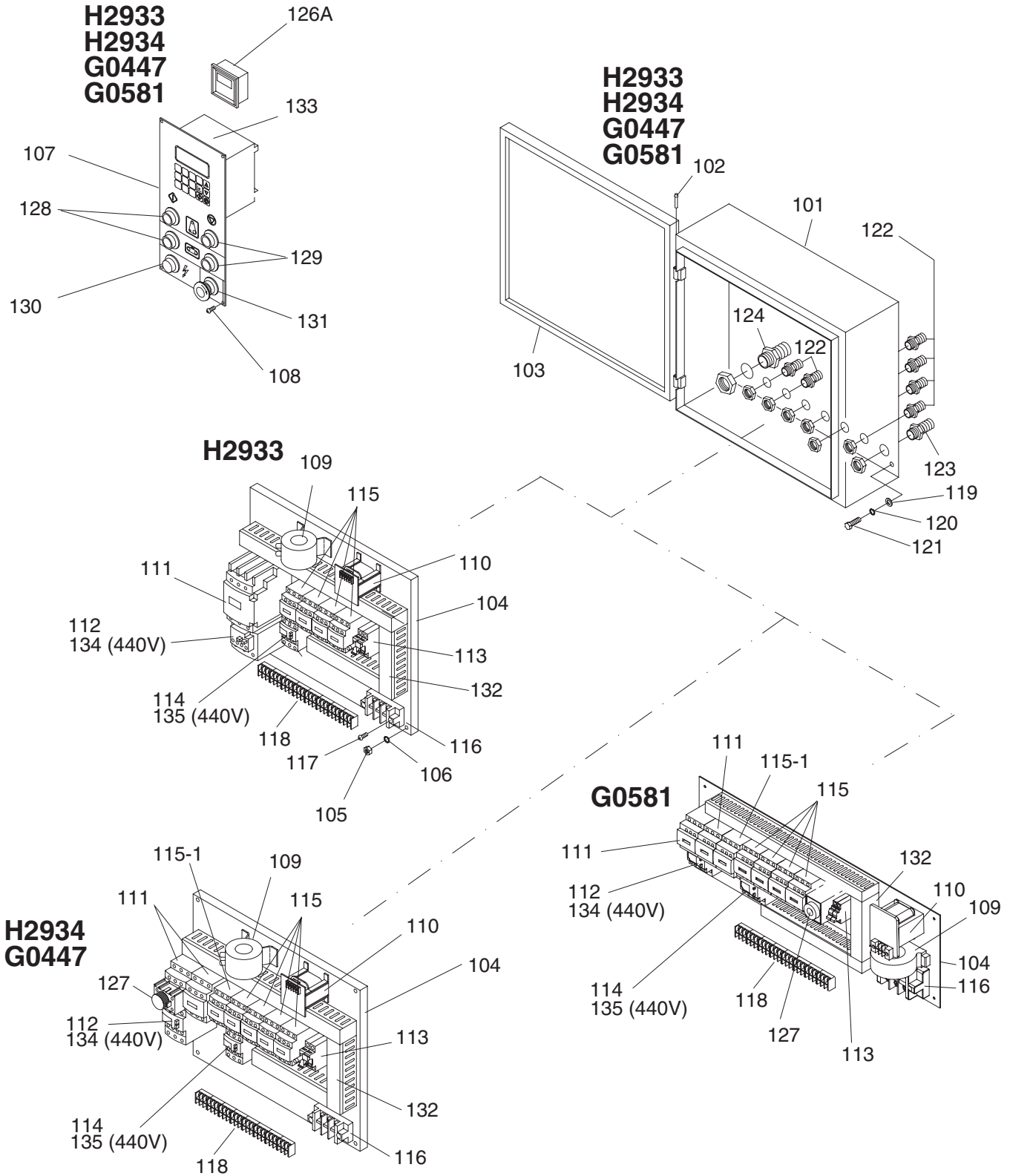
| REF | PART # | DESCRIPTION |
|-----|------------|---------------------------------|
| 101 | PH29337101 | UPPER FRAME COVER (H2933) |
| 101 | PH29347101 | UPPER FRAME COVER (H2934) |
| 101 | P04477101 | UPPER FRAME COVER (G0447) |
| 101 | P05817101 | UPPER FRAME COVER (G0581) |
| 102 | PH29337102 | DUST PORT 4" |
| 103 | PS14M | PHLP HD SCR M6-1 X 12 |
| 104 | PH29337104 | LEFT ACCESS PANEL (H2933) |
| 104 | PH29347104 | LEFT ACCESS PANEL(H2934) |
| 104 | P04477104 | LEFT ACCESS PANEL (G0447) |
| 104 | P05817104 | LEFT ACCESS PANEL (G0581) |
| 105 | PH29337105 | RIGHT ACCESS PANEL (H2933) |
| 105 | PH29347105 | RIGHT ACCESS PANEL (H2934) |
| 105 | P04477105 | RIGHT ACCESS PANEL (G0447) |
| 105 | P05817105 | RIGHT ACCESS PANEL (G0581) |
| 106 | PH29337106 | DOOR LOCK |
| 107 | PB07 | HEX BOLT 5/16-18 X 3/4 |
| 108 | PH29337108 | FLAT WASHER 5/16 |
| 109 | PH29337109 | RIGHT DOOR, LOWER FRAME (H2933) |
| 109 | PH29347109 | RIGHT DOOR, LOWER FRAME (H2934) |
| 109 | P04477109 | RIGHT DOOR, LOWER FRAME (G0447) |

| REF | PART # | DESCRIPTION |
|-------|--------------|---------------------------------|
| 109 | P05817109 | RIGHT DOOR, LOWER FRAME (G0581) |
| 109-1 | PH29337109-1 | LEFT DOOR, LOWER FRAME (H2933) |
| 109-1 | PH29347109-1 | LEFT DOOR, LOWER FRAME (H2934) |
| 109-1 | P04477109-1 | LEFT DOOR, LOWER FRAME (G0447) |
| 109-1 | P0581109-1 | LEFT DOOR, LOWER FRAME (G0581) |
| 110 | PFH03 | FLAT HD SCR 1/4-20 X 1/2 |
| 111 | PH29337111 | FRONT PROTECTION PLATE (H2933) |
| 111 | PH29347111 | FRONT PROTECTION PLATE (H2934) |
| 111 | P04477111 | FRONT PROTECTION PLATE (G0447) |
| 111 | P05817111 | FRONT PROTECTION PLATE (G0581) |
| 112 | PW06 | FLAT WASHER 1/4 |
| 113 | PS14M | PHLP HD SCR M6-1 X 12 |
| 114 | PB83M | HEX BOLT M6-1.0 X 16 |
| 115 | PH29337115 | STANDOFF BRACKET |



Main Electrical Panel and Controls Diagram

8000 Series Parts



Main Electrical Panel and Controls Parts List

| REF | PART # | DESCRIPTION |
|-----|------------|--|
| 101 | PH29338101 | ELECTRICAL CONTROL BOX (H2933) |
| 101 | PH29348101 | ELECTRICAL CONTROL BOX (H2934/G0447) |
| 101 | P05818101 | ELECTRICAL CONTROL BOX (G0581) |
| 102 | PH29338102 | HINGE |
| 103 | PH29338103 | DOOR (H2933) |
| 103 | PH29348103 | DOOR (H2934/G0447) |
| 103 | P05818103 | DOOR (G0581) |
| 104 | PH29338104 | BASE PLATE (H2933) |
| 104 | PH29348104 | BASE PLATE (H2934/G0447) |
| 104 | P05818104 | BASE PLATE (G0581) |
| 105 | PN05 | HEX NUT 1/4-20 |
| 106 | PLW02 | LOCK WASHER 1/4 |
| 107 | PH29338107 | CONTROL PANEL |
| 108 | PS07M | PHLP HD SCR M4-.7 X 8 |
| 109 | PH29338109 | CURRENT SENSOR |
| 110 | PH29338110 | TRANSFORMER |
| 111 | PH29338111 | CONTACTOR LC1-D40 (H2933) |
| 111 | PH29348111 | CONTACTOR LC1-D386 (H2934/G0447/G0581) |
| 112 | PH29338112 | RELAY LR3-D3355 220V (30-40A) (H2933) |
| 112 | PH29348112 | RELAY LR3-D326 220V (23-32A) (H2934/G0447) |
| 112 | P05818112 | RELAY LR3D-356 220V (30-38A) (G0581) |
| 113 | PH29338113 | FUSE TE10.3 X 38 & 500V/4Ax2 |
| 114 | PH29338114 | RELAY LR3D-086 220V (2.5-4A) (H2933/H2934/G0447) |

H2933 440V CONVERSION RELAYS

| | | |
|-----|------------|--|
| 134 | PH29338134 | RELAY LR3D-3322 440V (17-25A) (H2933) |
| 135 | PH29338135 | RELAY LR3D-076 440V (1.6-2.5A) (H2933) |

H2934 440V CONVERSION RELAYS

| | | |
|-----|------------|--|
| 134 | PH29348134 | RELAY LR3D-216 440V (12-18A) (H2934) |
| 135 | PH29338135 | RELAY LR3D-076 440V (1.6-2.5A) (H2934) |

| REF | PART # | DESCRIPTION |
|-------|--------------|--|
| 114 | P05818114 | RELAY LR3D-126 220V (5.5-8A) (G0581) |
| 115 | PH29338115 | CONTACTOR LC1-D096 |
| 115-1 | PH29348115-1 | CONTACTOR LC1-D256 (H2934/G0447) |
| 115-1 | P05818115-1 | CONTACTOR LC1-D326 (G0581) |
| 116 | PH29338116 | POWER WIRE TERMINAL (H2933) |
| 116 | PH29348116 | POWER WIRE TERMINAL (H2934/G0447) |
| 116 | P05818116 | POWER WIRE TERMINAL (G0581) |
| 118 | PH29338118 | TERMINAL PLATE |
| 119 | PW06 | FLAT WASHER 1/4 |
| 120 | PLW02 | LOCK WASHER 1/4 |
| 121 | PB19 | HEX BOLT 1/4-20 X 1/2 |
| 122 | PH29338122 | PU CONNECTOR 1/2" |
| 123 | PH29338123 | PU CONNECTOR 3/4" |
| 124 | PH29338124 | CABLE CONNECTOR 1" |
| 126A | PH29338126A | DIGITAL AMP METER N/S |
| 127 | PH29348127 | START DELAY LADS2 (H2934/G0447) |
| 127 | P05818127 | START DELAY TRD-N (STON BRAND) (G0581) |
| 128 | PH29338128 | START SWITCH |
| 129 | PH29338129 | STOP SWITCH |
| 130 | PH29338130 | POWER INDICATION LIGHT |
| 131 | PH29338131 | EMERGENCY STOP SWITCH |
| 132 | P05818132 | WIRE COLUMN (G0581) |
| 132 | PH29338132 | WIRE COLUMN (H2933/H2934/G0447) |
| 133 | PH29338133 | COMPUTER |

G0447 440V CONVERSION RELAYS

| | | |
|-----|------------|--|
| 134 | PH29348134 | RELAY LR3D-216 440V (12-18A) (G0447) |
| 135 | PH29338135 | RELAY LR3D-076 440V (1.6-2.5A) (G0447) |

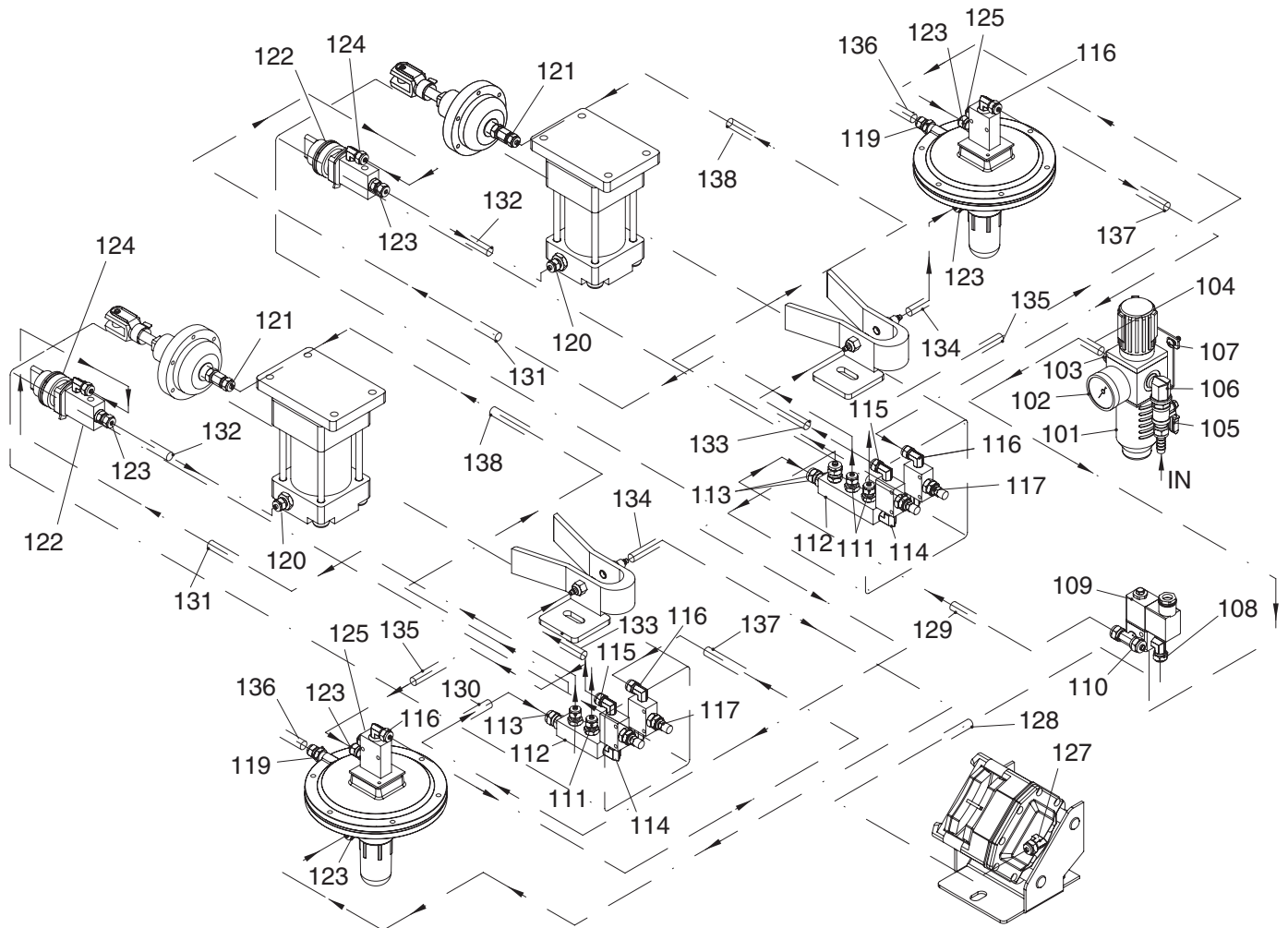
G0581 440V CONVERSION RELAYS

| | | |
|-----|------------|--------------------------------------|
| 134 | PH29348134 | RELAY LR3D-216 440V (12-18A) (G0581) |
| 135 | P05818135 | RELAY LR3D-086 440V (2.5-4A) (G0581) |



Belt Oscillation System Diagram

9000 Series Parts



Belt Oscillation System Parts List

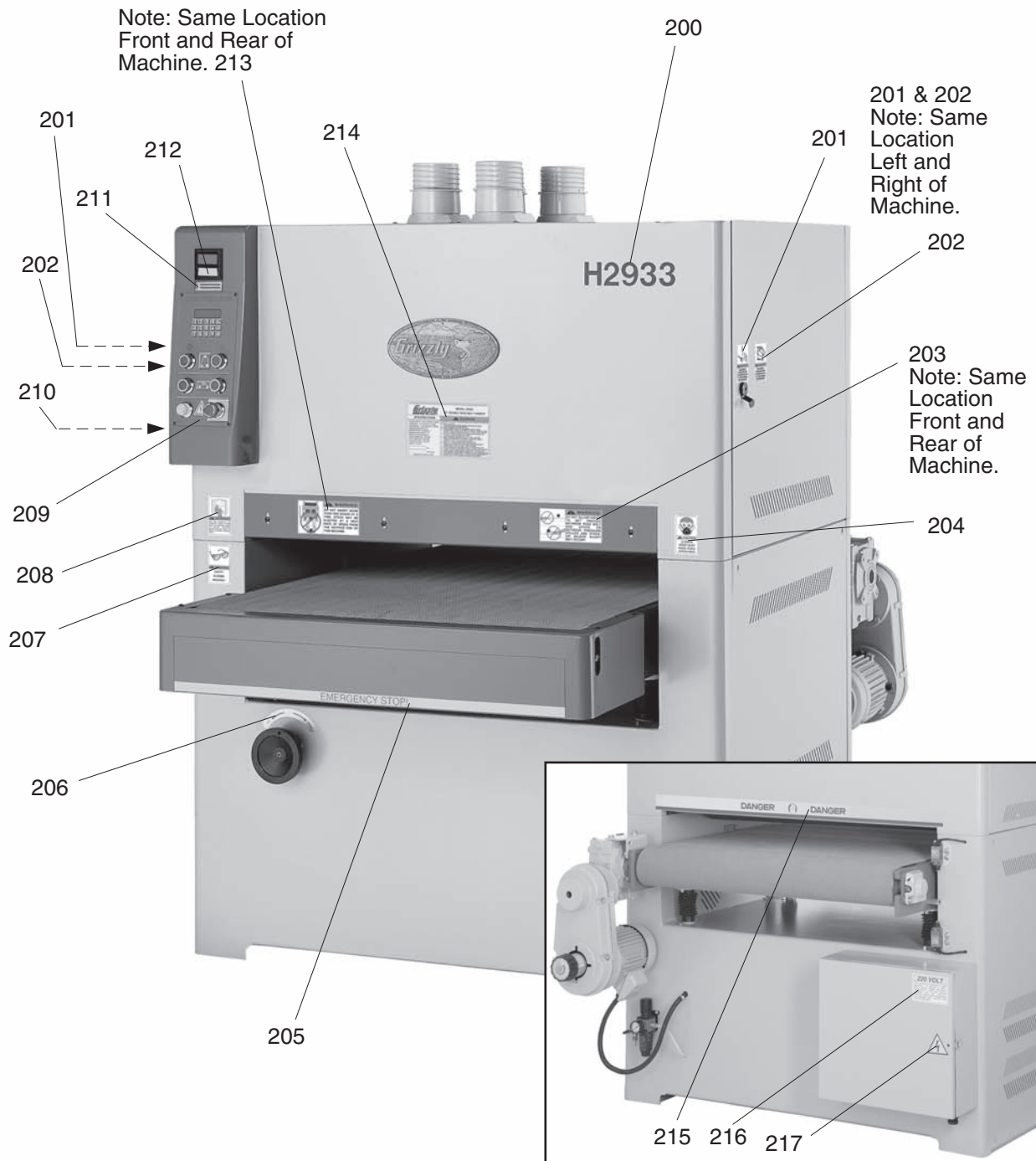
| REF | PART # | DESCRIPTION |
|-----|------------|--------------------------------|
| 101 | PH29339101 | FILTER CUP |
| 102 | PH29339102 | REGULATOR W/GAUGE |
| 103 | PH29339103 | BRONZE CONNECTOR |
| 104 | PH29339104 | FLEXIBLE HOSE |
| 105 | PH29339105 | AIR SWITCH |
| 106 | PH29339106 | ELBOW |
| 107 | PS22 | PHLP HD SCR 10-24 x 5/8 |
| 108 | PH29339108 | ELBOW 5/16N X1/8T 90° |
| 109 | PH29339109 | SOLENOID VALVE |
| 110 | PH29339110 | T-FITTING 5/16N X 5/16N X 1/8T |
| 111 | PH29339111 | CONNECTOR |
| 112 | PH29339112 | MANIFOLD 1/4N |
| 113 | PH29339113 | CONNECTOR 5/16N X1/8T |
| 114 | PH29339114 | ELBOW 1/4N X 1/4N 90° |
| 115 | PH29339115 | CONNECTOR 1/4N X1/8T 90° |
| 116 | PH29339116 | CONNECTOR 1/4N X1/8T 90° |
| 117 | PH29339117 | THROTTLE VALVE |
| 119 | PH29339119 | CONNECTOR 1/4N X1/8T |

| REF | PART # | DESCRIPTION |
|-----|------------|----------------------------|
| 120 | PH29339120 | CONNECTOR 3/8N X1/8T |
| 121 | PH29339121 | CONNECTOR 1/4N X1/8T |
| 122 | PH29339122 | AIR SWITCH |
| 123 | PH29339123 | CONNECTOR 1/4N X1/8T |
| 124 | PH29339124 | CONNECTOR 1/4N X1/8T 90° |
| 125 | PH29339125 | BUFFER |
| 127 | PH29339127 | CONNECTOR 5/16N X 1/8T 90° |
| 128 | PH29339128 | 8MM FLEXIBLE HOSE |
| 129 | PH29339129 | 8MM FLEXIBLE HOSE |
| 131 | PH29339131 | 6MM FLEXIBLE HOSE |
| 132 | PH29339132 | 6MM FLEXIBLE HOSE |
| 133 | PH29339133 | 6MM FLEXIBLE HOSE |
| 134 | PH29339134 | 6MM FLEXIBLE HOSE |
| 135 | PH29339135 | 6MM FLEXIBLE HOSE |
| 136 | PH29339136 | 6MM FLEXIBLE HOSE |
| 137 | PH29339137 | 6MM FLEXIBLE HOSE |
| 138 | PH29339138 | 6MM FLEXIBLE HOSE |



Machine Label Diagram

9000 Series Parts



WARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine **MUST** maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, **REPLACE** that label before using the machine again. Contact Grizzly at (800) 523-4777 or www.grizzly.com to order new labels.



Machine Label List

| REF | PART # | DESCRIPTION |
|-----|------------|---------------------------|
| 200 | PH29339200 | LABEL, MODEL H2933 |
| 200 | PH29339200 | LABEL, MODEL H2934 |
| 200 | P04479200 | LABEL, MODEL G0447 |
| 200 | P05819200 | LABEL, MODEL G0581 |
| 201 | PLABEL-13 | LABEL, UNPLUG SANDER |
| 202 | PLABEL-30 | LABEL, DOOR CLOSED |
| 203 | PLABEL-22 | LABEL, HAND PINCH IN BELT |
| 204 | PLABEL-32 | LABEL, DUST MASK |
| 205 | P05819205 | LABEL, EMERGENCY STRIPE |
| 206 | PH29339206 | LABEL, ROTATION LABEL |
| 207 | PLABEL-11 | LABEL, SAFETY GLASSES |
| 208 | PLABEL-12 | LABEL, READ MANUAL |
| 209 | PH29339209 | LABEL, CONTROL PANEL FACE |
| 210 | PLABEL-27 | LABEL, CONVERSION CHART |

| REF | PART # | DESCRIPTION |
|-----|------------|--------------------------|
| 211 | PH29339211 | LABEL, H2933 AMP SCALE |
| 211 | PH29349211 | LABEL, H2934 AMP SCALE |
| 211 | P04479211 | LABEL, G0447 AMP SCALE |
| 211 | P05819211 | LABEL, G0581 AMP SCALE |
| 212 | PH29339212 | LABEL, LOAD METER FACE |
| 213 | PLABEL-17 | LABEL, FEED ONLY ONE |
| 214 | PH29339214 | LABEL, H2933 DATA |
| 214 | PH29349214 | LABEL, H2934 DATA |
| 214 | P04479214 | LABEL, G0447 DATA |
| 214 | P05819214 | LABEL, G0581 DATA |
| 215 | P05819215 | LABEL, DANGER STRIPE |
| 216 | P05819216 | LABEL, 220-VOLT PREWIRED |
| 217 | PLABEL-14 | LABEL, ELECTRICITY |



WARRANTY & RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.





WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.**

1. How did you learn about us?

- Advertisement
- Card Deck
- Friend
- Website
- Catalog
- Other:

2. Which of the following magazines do you subscribe to?

- | | | |
|---|--|---|
| <input type="checkbox"/> Cabinet Maker | <input type="checkbox"/> Popular Mechanics | <input type="checkbox"/> Today's Homeowner |
| <input type="checkbox"/> Family Handyman | <input type="checkbox"/> Popular Science | <input type="checkbox"/> Wood |
| <input type="checkbox"/> Hand Loader | <input type="checkbox"/> Popular Woodworking | <input type="checkbox"/> Wooden Boat |
| <input type="checkbox"/> Handy | <input type="checkbox"/> Practical Homeowner | <input type="checkbox"/> Woodshop News |
| <input type="checkbox"/> Home Shop Machinist | <input type="checkbox"/> Precision Shooter | <input type="checkbox"/> Woodsmith |
| <input type="checkbox"/> Journal of Light Cont. | <input type="checkbox"/> Projects in Metal | <input type="checkbox"/> Woodwork |
| <input type="checkbox"/> Live Steam | <input type="checkbox"/> RC Modeler | <input type="checkbox"/> Woodworker West |
| <input type="checkbox"/> Model Airplane News | <input type="checkbox"/> Rifle | <input type="checkbox"/> Woodworker's Journal |
| <input type="checkbox"/> Modeltec | <input type="checkbox"/> Shop Notes | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Old House Journal | <input type="checkbox"/> Shotgun News | |

3. What is your annual household income?

- \$20,000-\$29,000
- \$30,000-\$39,000
- \$40,000-\$49,000
- \$50,000-\$59,000
- \$60,000-\$69,000
- \$70,000+

4. What is your age group?

- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70+

5. How long have you been a woodworker/metalworker?

- 0-2 Years
- 2-8 Years
- 8-20 Years
- 20+ Years

6. How many of your machines or tools are Grizzly?

- 0-2
- 3-5
- 6-9
- 10+

7. Do you think your machine represents a good value? Yes No

8. Would you recommend Grizzly Industrial to a friend? Yes No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?
Note: We never use names more than 3 times. Yes No

10. Comments: _____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE



Place
Stamp
Here



GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069



FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

| |
|----------------------------------|
| Name _____ |
| Street _____ |
| City _____ State _____ Zip _____ |

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

grizzly.com

TOOL WEBSITE

Buy Direct and Save with Grizzly® – Trusted, Proven and a Great Value!

*Visit Our Website Today And Discover
Why Grizzly® Is The Industry Leader!*

- SECURE ORDERING
- ORDERS SHIPPED WITHIN 24 HOURS
- E-MAIL RESPONSE WITHIN ONE HOUR

-OR-

Call Today For A **FREE**
Full Color Catalog

1-800-523-4777

